

CUADROS

Cuadro 1 Lista de Contrapartes e Integrantes del Equipo de Estudios de JICA

Name	Official Position
<u>Counterparts</u>	
Roberto Chávez	Chief Counterpart, MAGA
Juan José Cano	MAGA Coordinator, Chimaltenango province
Mario Roberto Gomez	MAGA Coordinator, Chimaltenango province
Rafael Raúl Rodríguez Cojólón	MAGA Coordinator, Chimaltenango province
Carlos Rolando Santos Girón	MAGA Coordinator, Chimaltenango province
Juan Gerardo Mendez G.	MAGA Coordinator, Sololá province
Cristobal Antonio Márquez Artero	MAGA Coordinator, Sololá province
Orlan Rodas de León	MAGA Coordinator, Totonicapán province
Jorge Guevara Santos	MAGA Coordinator, Quetzaltenango province
Oliverio B. Portillo Méndez	MAGA, Development management Division
Oscar César López Maldonado	PLAMAR
Mario Norberto López Rodríguez	PLAMAR
<u>JICA Experts</u>	
Kenjiro Onaka	Team leader
Koh Watanabe	Expert for participatory development
Yuji Hatakeyama	Environmental expert
Toru Ide	Environmental expert
Yusuke Goto	Environmental expert
Yasuo Aonishi	Sociologist
Luis Rosado	Agronomist
Makoto Yamada	Marketing and agricultural processing expert
Fumiaki Murakami	Infrastructure engineer
Katsuya Kamisato	Infrastructure engineer
Junichi Usami	Infrastructure engineer
Saeko Ichikawa	Health expert
Minako Kakuma	Health expert
Ronald Castellanos	Health expert
Ayako Nishiwaki	Expert for participatory development and gender
Michinori Yoshino	Logistic coordinator

Cuadro 2 Uso de Suelos y Clasificación de Pobreza basados en el Criterio del FIS en el Departamento de Chimaltenango

No.	Name of Municipality	Indicator of Poverty	Classification of Poverty:*	Evaluation for Poverty	Land Use	Evaluation for Land Use	Limitation of Uptake of Water**	Evaluation for Uptake Water	Overall Evaluation
1	Chimaltenango	12.83	d	No	Maize, Frijol, Vegetables	Yes	No	Yes	No
2	San Jose Poaquil	12.74	d	No	Maize, Frijol, Vegetables, Coffee	Yes	No	Yes	No
3	San Martin Jitotepeque	16.74	c	Yes	Coffee, Maize, Frijol	No	No	Yes	No
4	Comalapa	19.8	c	Yes	Maize, Frijol, Vegetables	Yes	Yes	No	No
5	Santa Apolonia	13.65	d	No	Maize, Frijol, Vegetables	Yes	No	Yes	No
6	Tecpan Guatemala	12.8	d	No	Maize, Frijol, Vegetables	Yes	Partially		No
7	Patzun	17.95	c	Yes	Maize, Frijol, Vegetables	Yes	Partially		Yes
8	Pochuta	16.91	c	Yes	Coffee, Maize, Frijol	No	No	Yes	No
9	Patzicia	29.59	b	No	Maize, Frijol, Vegetables	Yes	Yes	No	No
10	Santa Cruz de Balanya	21.75	b	No	Maize, Frijol, Vegetables	Yes	Yes	No	No
11	Acatenango	16.66	c	Yes	Coffee, Maize, Frijol	No	No	Yes	No
12	Yepocapa	14.15	d	No	Coffee, Maize, Frijol	No	No	Yes	No
13	San Andres Itzapa	20.46	b	No	Maize, Frijol, vegetables	Yes	Partially		No
14	Parramos	26.73	b	No	Maize, Frijol, Vegetables	Yes	No	Yes	No
15	Zaragoza	17.52	c	Yes	Maize, Frijol, Vegetables	Yes	Yes	No	No
16	El Tejar	10.97	d	No	Maize, Frijol, Vegetables	Yes	No	Yes	No

*: Poverty Classification

a: Extreme poverty, above 30

b: Severe poverty, 20-29.99

c: Regular poverty, 15-19.99

d: Relative poverty, 10- 14.99

e: Low poverty, below 10

**: Chimaltenango province plays an important role in the provision of drinking water to Guatemala city.

Especially water from the basin of the Pixcaya river is the most important. It is considered that adjustment and coordination of water use for drinking water in Guatemala city and agricultural water use in Chimaltenango province are very difficult and municipalities where cover the Pixcaya river basin should be excluded for selection of model microcuencia.

Cuadro 3 Lista de Micro-cuencas en el Municipio de Patzún

Name of River Basin	Number	Name of Microcuenca	Area of Microcuenca (km2)	Name of aldeas or caserios
Los Chocoyos	C-1	El Llano	4.8	Los Pinos, El Llano, Pacaman
	C-2	Los Pinos	6	Cruz de Santiago
	C-3	Xeoj	3.7	Xeoj
	C-4	Los Idolos	8.7	Patzun, Saquiya, Mocolixot Alto, Mocolixot Bajo
	C-5	Chuiquel	5.3	Chisal, Chuiquel, Mocolixot Alto, Mocolixot Bajo
	C-6	Sabalpop	1.2	Sabalpop
	C-8	Pacacquix Bajo	4	Chichoy Alto Paraíso
	C-8	Pacacquix Alto	9.3	Xepatan, Finca Patoquer, Chuchuca Alto, Chuchuca Bajo, Finca Chuiquel, Xeatzan Alto, Xeatzan Bajo
Madre Vieja	M-1	Chichoy	2.7	Chichoy , Chichoy Bajo
	M-2	Paxula	3.1	Chichoy Alto Paraiso,
	M-3	Panibaj	1.6	Chipiactal, Panimaquim
	M-4	Panimaquim	5.2	Panibaj, Chipiactal,
	M-5	Chinimachicaj	8.1	Panimaquim, Chinimachicaj, Chuaquenum
San Jorge	S-1	Xejolon	8.4	Chinimachicaj, Chuaquenum
	S-2	La Vega	14	Xejolon, Popobaj
	S-3	Chicap	4.6	Finca San Rafael la Vega, Finca San Jose Panimache, Finca San Antonio Panimaquim
Nican	N-1	Xetzisi	8.4	Finca Chicap
	N-2	Los Encuentros	2.1	Xetzisi, Xepatan
	N-3		9.2	Los Encuentros
Xaya	X-1	Xaya Alto	8.1	
	X-2	Villa Linda	8.3	Finca San Jorge
	X-3	La Vega	3.6	Villa Linda, Nimaya, Pacoc, Chuchupate, Finca Las
	X-4	Cojobal	2.5	La Vega
	X-5	Las Canoas	4.2	Finca La Sierra, Cojobal
	X-6	La Trompeta	7.2	Las Camalias, Los Encuentritos, Finca San
	X-7	Las Flores	4	Finca San Antonio las Odilias,
	X-8	Zaren	3.9	La Trompeta, Trompetilla, La Cienaga, San Lorenzo, Joya de la Ramona
	X-9	Pachumulin	2.7	El Sitio, San Isidro, Finca San Rafael el Sitio
	X-10	La Pila	1.5	El Garabato, Finca la Estancia
	X-11	Pena Colorada	3.8	Pachumulin, La Pila

Cuadro 4 Evaluación de Comunidades Seleccionadas en el Departamento de Chimaltenango

Name of Municipality	Name of Community	Indicators for Poverty		Number of Households in Community		Area of River Basin (km ²)		Land Use		Access (length from main road)	Legal Uplake of Water Source	Overlapped by Another Projects	Social Problems		Overlapped Another Municipality	Intention for Cooperation for the Survey by head of Municipality		Intention for Cooperation for the Survey by heads of Adlea or Caserio	Overall Assessment	
		(no)	Assessment	(km2)	Assessment	Kind of crops	Assessment	Yes or No	Assessment				Yes or No	Yes or No		Yes or No				
Patzun	1 Caserio La Trompetilla	19.35	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No	
	2 Caserio El Garabato	18.95	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No	
	3 Caserio Pachut	18.70	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No	
	4 Caserio Popabaj	16.63	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No	
	5 Caserio Chicaman, Villa Patzún	21.00	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No	
	6 Caserio Xetziti, Xepatan	20.61	Yes	8.4	Yes	basic crops+vegetable	Yes	7.4	Yes	No	Yes	No	Yes	No	Yes	-	-	-	Yes	
	7 Aldea Xatzán Bajo	14.76	Yes	9.3	Yes	basic crops+vegetable	Yes	8.2	Yes	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	
	8 Caserio Pachumulin	14.47	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No
	9 Adlea Panibaj, Panibaj	14.05	Yes	1.6	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No
	10 Aldea San Jose Xepatan	14.02	Yes	9.3	Yes	basic crops+vegetable	Yes	5.4	Yes	No	Yes	No	Yes	No	Yes	-	-	-	Yes	
	11 Caserio Chaquetum	13.85	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No
	12 Caserio Mocolixot Bajo	13.80	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No
	13 Aldea Chichoy	13.64	Yes	2.7	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No

*: not identify this location

Cuadro 5 Uso de Suelos y Clasificación de Pobreza basados en el Criterio del FIS en el Departamento de Sololá

No.	Name of Municipality	Indicator of Poverty	Classification of Poverty*	Evaluation for Poverty	Land Use	Evaluation for Land Use	Overall Evaluation
1	Solola	9.67	e	No	Vegetables, Potato, Maize	No	No
2	San Jose Chacaya	12.12	d	No	Potato, Vegetables, Maize	No	No
3	Santa Maria Visitacion	9.07	e	No	Coffee , Potato, Maize	Yes	No
4	Santa Lucia Utatlan	8.09	e	No	Potato, Vegetables, Maize	No	No
5	Nahuala	11.05	d	No	Coffee , Maize, Vegetables, Potato	Yes	No
6	Santa Catarina Ixtahuacan	12.01	d	No	Coffee , Banana, Maize	Yes	No
7	Santa Clara La Laguna	24.76	b	No	Coffee , Maize	Yes	No
8	Conception	45.74	a	No	Vegetables, Potato, Maize	No	No
9	San Andres Semetabaj	14.07	d	No	Maize, Vegetables, Flowers	No	No
10	Panajachel	11.25	d	No	Maize, Vegetables	No	No
11	Santa Catarina Palopo	29.65	b	No	Maize	No	No
12	San Antonio Palopo	31.08	a	No	Coffee , Vegetables	Yes	No
13	San Lucas Tomliman	26.75	b	No	Coffee , Maize, Frejol	Yes	No
14	Santa Cruz La Laguna	23.31	b	No	Coffee , Vegetable, Maize	Yes	No
15	San Pablo La Laguna	39.45	a	No	Coffee , Maize, Vegetables	Yes	No
16	San Marcos La Laguna	36.62	a	No	Maize, Vegetables	No	No
17	San Juan La Laguna	15.16	c	Yes	Coffee , Maize, Vegetables	Yes	Yes
18	San Pedro La Laguna	13.4	d	No	Coffee , Maize, Vegetables	Yes	No
19	Santiago Atitlan	41.9	a	No	Coffee , Maize, Frejol	Yes	No

*: Poverty Classification

a: Exstreme poverty, above 30

b: Severe poverty, 20-29.99

c: Regular poverty , 15-19.99

d: Relative poverty, 10- 14.99

e: Low poverty, below10

Cuadro 6 Lista de Micro-cuencas en el Municipio de San Juan de la Laguna

Name of River Basin	Number	Name of Microcuenca	Area of Microcuenca (km2)	Name of aldeas or caserios
Quebrada Seca	Q-1	San Juan La Laguna	9.9	Pueblo San Juan La Laguna
Yatza	Y-1	Paquib/Palestina	2.8	Part of Paqub and Palestina
	Y-2	Palestina	3.2	Palestina
	Y-3	Panyevar	5.7	Aldea Panyevar
	Y-4	Pasajquim	5.8	Pasajquim
	Y-5	right of Yatza	3.2	-

Cuadro 7 Evaluación de Comunidades Seleccionadas en el Departamento de Sololá

Name of Municipality	Name of Community	Indicators for Poverty		Number of Households in Community		Area of River Basin (km ²)		Land Use		Access (length from main road)		Legal Uptake of Water Source	Overrapped by Another Projects		Social Problems		Overrapped Another Municipality		Intention foro Cooperation for the Survey by head of Municipality		Intention for Cooperation for the Survey by heads of Adlea or Caserio		Overall Assessment			
		(no)	Assess ment	(km2)	Assess ment	Kind of crops	Assess ment (km)	Assess ment	Yes or No	Yes or No	Assess ment	Yes or No	Yes or No	Yes or no	Yes or no	Yes or no	Yes or no	Yes or no	Yes or no	Yes or no	Yes or no	Yes or no	Yes or no	No	Yes	
1 San Juan La Laguna	1 Pueblo San Juan La Lagur	585	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No	Yes
	2 Panyeyar	206	Yes	5.8	Yes	Coffee +Basic crops	6	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

Cuadro 8 Uso de Suelos y Clasificación de Pobreza basados en el Criterio del FIS en el Departamento de Totonicapán

No.	Name of Municipality	Indicator of Poverty	Classification of Poverty*	Evaluation for Poverty	Land Use (%) and Rank**	Overall Evaluation
1	Totonicapán	7.6	e	No	54% (4)	No
2	San Cristobal Totonicapán	16.15	c	Yes	27% (7)	No
3	San Francisco El Alto	14.35	d	No	28% (6)	No
4	San Andres Xecul	15.81	c	Yes	15% (8)	No
5	Momostenango	15.24	c	Yes	45% (5)	No
6	Santa Maria Chiquimula	18.02	c	Yes	61% (3)	Yes
7	Santa Lucia La Reforma	37.45	a	No	66% (2)	No
8	San Bartolo	13.11	d	No	70% (1)	No

*: Poverty Classification

a: Extreme poverty, above 30

b: Severe poverty, 20-29.99

c: Regular poverty, 15-19.99

d: Relative poverty, 10- 14.99

e: Low poverty, below 10

** : Rate of coverage by forests and ranks

Cuadro 9 Lista de Micro-cuencas en el Municipio de Santa María de Chiquimula (1/2)

Name of River Basin	Number	Name of Microcuenca	Area of Microcuenca (km2)	Name of aldeas or caserios
Alajsimier	A-1	No	7.1	No
Pacaranat*	P-1	Chiaj	9.9	Chiaj
	P-2	No	1.9	No
	P-3	Chicastro	6.9	Chicastro
	P-4	Patzam	4.2	Patzam Chipu
Tzancorral	T-1	Chuijom	5.2	Chuijom
Sajcoclaj	S-1	No	2.7	No
	S-2	Pamesabal	1.9	Pamesabal
Pachac	PC-1		7.7	No
	PC-2	Racana	7.3	Xocol Racana
	PC-3	Camaja	4.9	Camaja Xesuc Cipo
	PC-4	Chicaxul	3.9	Chicaxul Chuicabaj Chuecutinez
	PC-5	Chuiaj	8.1	Chuiaj Part of Santa Maria Chiquimula
	PC-6	El Rancho	5.9	Pamaxcolabaj Chuinatux Patzichaj Chuitacaj
	PC-7	Chuisena	4.5	Chuisena Chuisela Xeabaj
	PC-8	Xesana	9.1	Xesana Sanjuyup Chimisiya
	PC-9	Pachum	10.5	Pachum
	PC-10	Chuitacabaj	5.9	Chuibacabaj Chuanovez

Cuadro 9 Lista de Micro-cuencas en el Municipio de Santa María de Chiquimula (2/2)

Name of River Basin	Number	Name of Microcuenca	Area of Microcuenca (km2)	Name of aldeas or caserios
Sacmequena	PC-SAC-1	Chuichipop	1.4	Chuichipop
	PC-SAC-2	Ximulul	5.7	Ximulul Xesiquel Chuichac
	PC-SAC-3	Sacxoc	5.5	Sacxoc
	PC-SAC-3	Pugertinamint	2.8	Pugertinamint
	PC-SAC-4	Chuisiguan	1.9	Chuisiguan
	PC-SAC-5	Chuijoj	1.9	Chuijoj
	PC-SAC-6	Xebe	8.5	Tzansiguan Xetulup Xebe Tuluxan Chilux Patulup
	PC-SAC-7		11.7	Chinibajuyup Xotepe Xecachelaj Carorillo Chileon Tzununux
	PC-SAC-8		10.9	No
Sacbaj	SA-1	Choacorrall	13.1	Pansac Chivisicaja Choacorrall
	SA-2	Xejuyup	0.8	Xejuyup
	SA-3	Chimejia	6	Chimejia
	SA-4	Paxan	7.3	Paxan
Tzununa	TZN-1	Tzununa	5.3	Tzununa Xecaquix
	TZN-2	Pacomontux	4.2	Pacomontux
	TZN-3	Casa Blanca	7.1	Xecaja Xolabix Casa Blanca
	TZN-4	Chuachituj	7	Chuachituj
	TZN-5	Chuiabaj	2.9	Chuiabaj
	TZN-6	Pachoc	7.8	Tzansibiche Pachoc
	TZN-7	Chuijox	9.1	Chuijox Panabesac Papuerta Pachiyut Las Trojadas
	TZN-8	Panimajiox	6.6	Panimajiox
	TZN-9	Chomazan	6.6	Chomazan Aprisco chuipachec

Cuadro 10 Evaluación de Comunidades Seleccionadas en el Departamento de Totonicapán

Name of Municipality	Name of Community	Indicators for Poverty		Number of Households in Community		Area of River Basin (km ²)		Land Use		Access (length from main road)	Legal Utlake of Water Source	Overrapped by Another Projects		Social Problems		Overrapped Another Municipality		Intention for Cooperation for the Survey by head of Municipality		Intention for Cooperation for the Survey by heads of Adlea or Caserio		Overall Assessment		
		(no)	Assessment	(km2)	Assessment	Assessment	Assessment	Assessment	Assessment			Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment	Assessment		Assessment	Assessment
Santa Maria Chiquimula	1 Caserio Chuitacabaj	19.69	32 No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	2 Caserio Chijoj	18.69	61 Yes	1.9 No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	3 Caserio Chuirop o Chijoj	18.51	57 Yes	1.4 No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	4 Caserio Chipu	18.00	50 Yes	4.2 Yes	Yes	8 Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes		
	5 Caserio Xejujub	17.59	83 Yes	0.8 No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	6 Caserio Chuisiguan	17.20	198 Yes	2.8 No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	7 Aldea Xecaja	16.54	39 No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	8 Caserio Pachum	16.32	68 Yes	10.5 Yes	Yes	5.5 Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	Yes	
	9 Caserio Chicaxul	16.19	63 Yes	3.9 Yes	Yes	4.6 Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
	10 Caserio Paxan	15.73	62(25) No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11 Caserio Pamesabal	15.63	40 No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12 Caserio Chuisaboj	15.45	44 No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13 Caserio Chuiabaj	15.00	30 No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Cuadro 11 Uso de Suelos y Clasificación de Pobreza basados en el Criterio del FIS en el Departamento de Quetzaltenango

No.	Name of Municipality	Indicator of Poverty	Classification of Poverty*	Evaluation for Poverty	Land Use	Evaluation for Land Use	Overall Evaluation
1	Quetzaltenango	11.13	d	No	Maize, Vegetable, Potato	No	No
2	Salcája	12.05	d	No	Maize, Fruits	No	No
3	Olintepeque	12.62	d	No	Maize	No	No
4	San Carlos Sija	7.87	e	No	Maize	No	No
5	Sibilia	4.92	e	No	Maize,	No	No
6	Cabrcan	9.64	e	No	Maize, Fruits	No	No
7	Cajola	42.16	a	No	Maize, Fruits	No	No
8	San Miguel Sigüila	24.57	b	No	Maize	No	No
9	Ostuncalco	14.34	d	No	Maize, Fruits, Potato	No	No
10	San Mateo	22.63	b	No	Maize, Potato, Fruits	No	No
11	Concepcion Chiquirichapa	12.5	d	No	Maize, Potato	No	No
12	San Martín Sacatepeque	14.26	d	No	Potato, Maize, vegetables	No	No
13	Almolonga	12.06	d	No	Vegetables, Maize	No	No
14	Cantel	8.75	e	No	Maize, Fruits	No	No
15	Huitán	11.02	d	No	Maize, Fruits	No	No
16	Zunil	12.81	d	No	Maize, Vegetables	No	No
17	Colomba	24.83	b	No	Coffee, Maize	No	No
18	San Francisco La Unión	16.99	c	Yes	Maize	Yes	No**
19	El Palmar	22.58	b	No	Coffee, Maize	No	No
20	Coatepeque	13.66	d	No	Pasture, Sugar, Maize, Rice, Coffee, Rubber	No	No
21	Genova	30.39	a	No	Pasture, Maize, Coffee, Rice, Oil palm, Rubi	No	No
22	Flores Costa Cuca	19.66	c	Yes	Coffee, Maize	No	No
23	La Esperanza	10.49	d	No	Maize, Fruits	No	No
24	Paletina De Los Altos	15.27	c	Yes	Maize	Yes	Yes

** - An average of poverty in San Francisco La Unión municipality indicates "c" and Maize in land use, however, there are no communities having "c" in poverty as shown below: Then this municipality was evaluated as no and eliminated.

Name of Community	Indicator of Poverty	Classification
Pueblo San Francisco la Uni	60.99	a
Pala	9.26	e
Xeaj	8.42	e
Tzanjuyu	7.72	e
Chuestancia	6.48	e

*: Poverty Classification

a: Extreme poverty, above 30

b: Severe poverty, 20-29.99

c: Regular poverty, 15-19.99

d: Relative poverty, 10- 14.99

e: Low poverty, below 10

Cuadro 12 Lista de Micro-cuencas en el Municipio de Palestina de los Altos

Name of River Basin	Number	Name of Microcuenca	Area of Microcuenca (km2)	Name of aldeas or caserios
Turbala	T-1	Tuimuj	2.6	Tuimuj
	T-2	El Carmen	2.3	El Carmen El Carmen-2 Altamira
	T-3	San-Ishidro	3.2	San-Ishidro Cabrera Loz Perez
	T-4	El Socorro	1.3	El Socorro Los Marroquiness Buena Vista Roble Grande
	T-5	Los Gonzalez	2.5	Los Gonzalez Pueblo Palestina de Los Alto
	T-6	El Desierto	9.3	El Desierto Los Laureles
Palana	P-1	El Eden	2.7	El Eden Sinai
	P-2	Mira Pena	3.3	Mira Pena
Patzacan	PZ-1	Las Delicias	2.1	Las Delicias Buenos Aires
Ixchol	IX-1	Toj Guabil	4.1	Toj Guabil Toj chol Asuncion

Cuadro 13 Evaluación de Comunidades Seleccionadas en el Departamento de Quetzaltenango

Name of Municipality	Name of Community	Indicators for Poverty		Number of Households in Community		Area of River Basin (km ²)	Land Use		Access (length from main road)	Legal Utlake of Water Source	Overrapped by Another Projects		Social Problems		Overrappd Another Municipality		Intention foro Cooperation for the Survey by head of Municipality		Intention for Cooperation for the Survey by heads of Adlea or Caserio		Overall Assessment		
		(no)	Assess ment	Assess ment (km2)	Assess ment		Kind of crotmnt	Assess ment (km)			Yes or No	Assess or ment	Yes or No	Assess or ment	Yes or No	Assess or ment	Yes or No	Assess or ment	Yes or No	Assess or ment		Yes or No	Assess or ment
1 Palestina De Los Altos	1 Caserio Tojguabil	19.90	Yes	-	Yes	less 1	Yes	basic crops	Yes	Yes	No	Yes	No	Yes	No	-	-	-	-	-	No		
	2 Caserio Los Marroquines	19.52	Yes	1.5	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No	
	3 Caserio El Socorro	15.46	Yes	"	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No	
	4 Aldea El Carmen	16.58	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	No
	5 Caserio Los Cabrera o Molinos Los Ca	17.66	Yes	3.2	Yes	Yes	less 1	basic crops	Yes	Yes	No	Yes	No	Yes	no	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	6 Caserio SanIsidro o Los Diaz	15.59	"	"	Yes	Yes	less 1	basic crops	Yes	Yes	No	Yes	No	Yes	no	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	7 Caserio Los Perez	18.75	"	"	Yes	Yes	less 1	basic crops	Yes	Yes	No	Yes	No	Yes	no	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Cuadro 14 Procedimiento del Estudio Participativo

Steps	Activities	Contents	Output at each stage	Final Output
<div style="border: 1px solid black; padding: 5px; text-align: center;">Explanation of Study Procedure (Opening)</div>	1) Public Meeting-I	<ul style="list-style-type: none"> - Explanation of objectives, outline, procedure of the study. - Request cooperation of community members. 	-	<u>1. Community Profile</u> 1) Socio-economy 2) Agriculture & Livestock 3) Infrastructure 4) Environment 5) Health & Sanitation 6) Resource Map 7) Problem Analysis 8) Objective Analysis 9) Proposed Approach <u>2. Activity Report</u> 1) Key-informant Interview 2) Questionnaire Survey 3) Field Inspection 4) Public Meeting (I)-(V) 5) Representative Meeting (I)-(II)
<div style="border: 1px solid black; padding: 5px; text-align: center;">Study on Present Situation</div>	1) Key-informant Interview 2) Questionnaire Survey	<ul style="list-style-type: none"> - Interview with 5-10 key-informants with semi-structured interview. - Interview with 10-20 households with using simple questionnaire. 	<ul style="list-style-type: none"> - Brief community profile (draft) - List of problems and needs 	
<div style="border: 1px solid black; padding: 5px; text-align: center;">Identification of Problems & Needs</div>	1) Public Meeting-II, III (by gender, by age group) 2) Public Meeting-IV (by all members)	<ul style="list-style-type: none"> - Identification of problems and needs - Consensus on problems and needs - Ranking of needs - Selection of representatives 	<ul style="list-style-type: none"> - List of problems & needs with ranking - List of representatives 	
<div style="border: 1px solid black; padding: 5px; text-align: center;">Investigation of Problems, Needs & Potentials</div>	1) Field Inspection with representatives 2) Representative Meeting-I	<ul style="list-style-type: none"> - Confirmation of problems and potentials through site inspection - Preparation of Resource Map - Marketing condition in/around the cuenca - Environmental impact in/around the cuenca - Problem analysis 	<ul style="list-style-type: none"> - List of confirmed problems & needs - Resource map - Problem trees 	
<div style="border: 1px solid black; padding: 5px; text-align: center;">Investigation of Solutions</div>	1) Representative Meeting-II 2) Public Meeting -IV (by all members)	<ul style="list-style-type: none"> - Alternative (Approach) analysis - Consensus on approaches - Ranking of the approaches 	<ul style="list-style-type: none"> - Objective trees with approaches 	

Cuadro 15 Participación de las personas en las actividades del Estudio

Activities	Xeatzan Bajo			Panyevan			Pachum			Palestina					
	Date	Participants		Date	Participants		Date	Participants		Date	Participants				
		Male	Female		Total	Male		Female	Total		Male	Female	Total		
Public Meeting															
1. Public Meeting I	07/18	150	90	240	07/17	80	80	160	07/19	50	20	70	95	95	190
2. Public Meeting II	07/31	140	80	220	07/26	94	84	178	08/02	50	30	80	63	63	195
3. Public Meeting III	08/01	155	135	290	07/27	101	71	172	08/08	29	10	39	54	99	153
4. Public Meeting IV	08/07	125	120	245	08/01	106	97	203	08/16	43	30	73	52	89	141
5. Public Meeting V	08/28	90	80	170	08/09	88	71	159	08/30	47	37	84	57	101	158
Average Participation		132	101	233.0		93.8	80.6	174.4		43.8	25.4	69.2	64.2	96	167.4
Number of Households				325				360				160			297
Participation Rate (%)				71.7				48.4				43.3			56.4
Other Activities															
1. Key-informant Interview	7/19-21	15	3	18	7/18-20	8	4	12	7/25-26	14	3	17	22	8	30
2. Questionnaire survey	7/24-28	-	-	30	7/20-23	29	2	31	7/21-8/1	47	2	49	108	15	123
3. Representative Meeting I	08/24	20	10	30	08/04	17	7	24	08/23	23	8	31	19	11	30
4. Representative Meeting II	08/25	19	6	25	08/07	20	9	29	08/23	23	8	31	19	11	30

Activities	Los Cabrera/Morales			Los Diaz/Sector I			Los Perez					
	Date	Participants		Date	Participants		Date	Participants				
		Male	Female		Total	Male		Female	Total	Male	Female	Total
Public Meeting												
1. Public Meeting I	07/21	30	35	65	07/21	30	40	70	07/20	35	20	55
4. Public Meeting II	08/04	14	54	68	08/03	21	50	71	08/02	28	28	56
5. Public Meeting III	08/09	17	17	34	08/10	24	43	67	08/11	13	39	52
6. Public Meeting IV	08/16	16	33	49	08/17	18	32	50	08/18	18	24	42
9. Public Meeting V	09/13	12	37	49	09/12	27	40	67	09/11	18	24	42
Average Participation		17.8	35.2	53		24	41	65		22.4	27	49.4
Number of Households				83				107				107
Participation Rate (%)				63.9				60.7				46.2
Other Activities												
2. Key-informant Interview	7/28-29	7	3	10	7/26-27	7	3	10	7/24-25	8	2	10
3. Questionnaire survey	7/31-8/1	39	3	42	8/2-3	43	11	54	8/4-7	26	1	27
7. Representative Meeting I	08/22	7	3	10	08/22	6	5	11	08/22	6	3	9
8. Representative Meeting II	08/22	7	3	10	08/22	6	5	11	08/22	6	3	9

Cuadro 16 Indicadores para Seguimiento y Organización de la Ejecución y Manejo de los Proyectos (1/3)

No.	Name of the Project	Monitoring Indicators			Organization of monitoring
		condition of before implementation of the project	condition after implementation of the project		
Environment and Conservation Plans					
a-1	Restoration plan of the collapsed lands	1. Progress of completion of construction 2. Qualitative monitoring soil erosion 3. Farmer's participation rate	1. Growth rate of trees 2. Soil amounts to be eroded		An environmental committee in the community A executing office
a-2	Soil Conservation plan for steep farm lands	1. Progress of completion of construction 2. Farmer's participation rate	1. Growth rate of crop 2. Soil amounts to be eroded		An environmental committee in the community An executing office
a-3	Forestation plan	1. Progress of completion of construction 2. Farmer's participation rate	1. Growth rate of trees 2. No. of participant for forestation and training programs		An environmental committee in the community An executing office
a-4	Agro-forestry development plan	1. Progress of completion of construction 2. Farmer's participation rate	1. Growth rate of crops and trees 2. No. of participation for tree planting and training programs		An environmental committee in the community An executing office
a-5	Management plan of water quality	-	1. Content of toxicity materials in water		Municipality office
a-6	Solid wastes treatment plant	1. Progress of completion of construction	1. Quantity of solid wastes 2. Amount of produced composts 3. Financial status of a executing committee 3. Financial statement		An committee in the municipality A municipality office An executing office
Plans for Increasing Income Generation					
b-1	Plan for making composts	1. Progress of completion of construction	1. Production cost of compost per ton 2. Production of composites 3. Financial statement		A municipality office An executing office
b-2	Plan of model farm on potato production	1. Progress of completion of implementation	1. Number of farmer's visitors 2. Yield of potatoes		An executing committees in the municipality An executing office
b-3	Potato storage plan (a) farmer's level	1. Progress of completion of construction	1. Price of potatoes 2. Amount damaged during storage period and quality of potatoes		A executing committee in the community An executing office
	Potato storage plan (a) commercial level	1. Progress of completion of construction	1. Price of potatoes 2. Quality of potatoes 3. Financial statement		An executing committee in the municipality A municipality office An executing office
b-4	Potato processing plan	1. Progress of completion of construction	1. Production cost 2. Financial statement		Cooperatives in the community An executing office
b-5	Mini-irrigation plan	1. Progress of completion of construction 2. Farmer's participation rate for provision of labor force for construction	1. Net benefits 2. Collection Rate of water charge		Irrigation committee in the community An executing office
b-6	Payer-chicken Raising Plan for women's groups	1. Progress of completion of construction	1. Status for raising 2. Amount of eggs and saled eggs, and net profit of cooperatives		Women' cooperative in villages An executing office

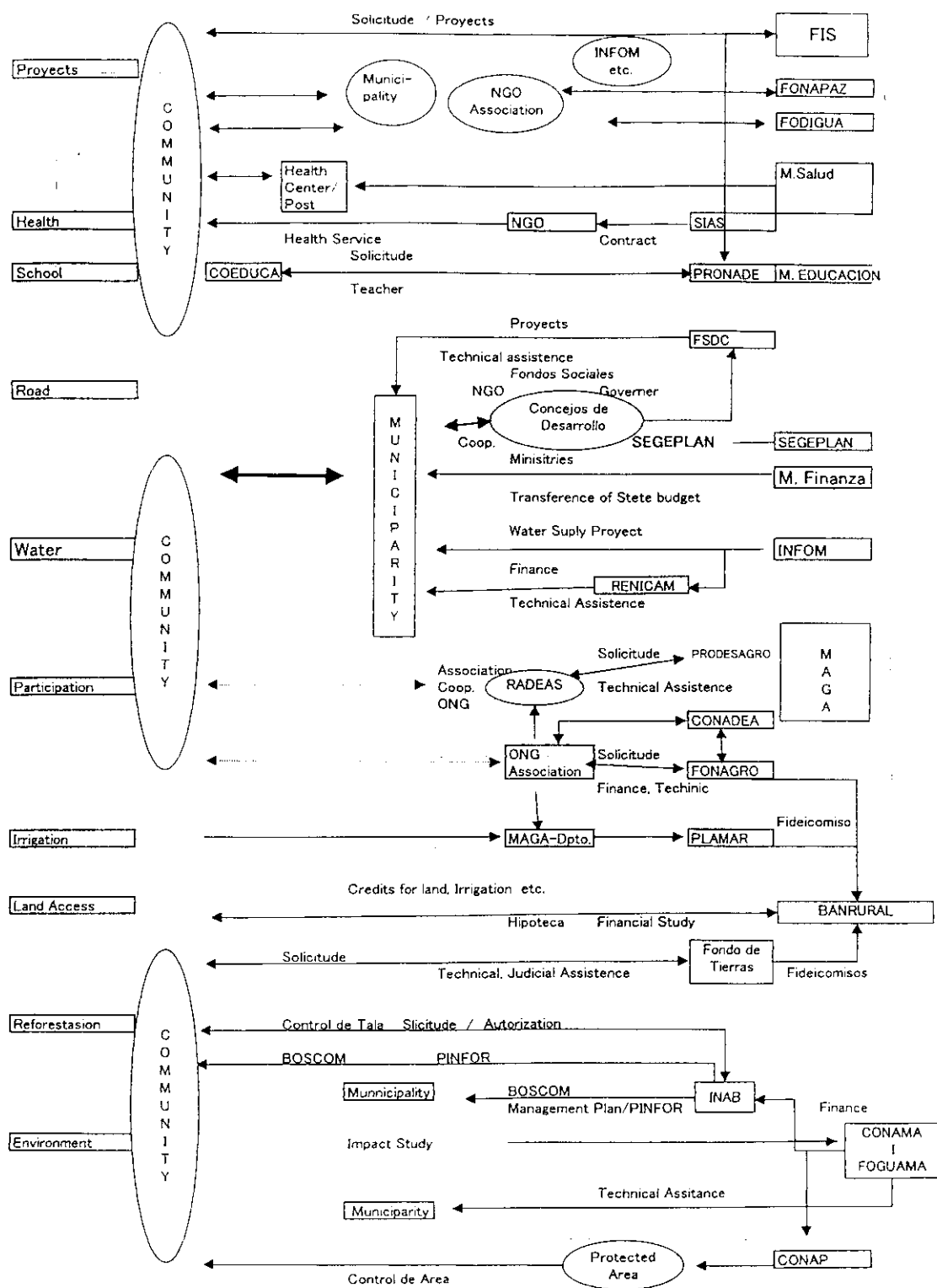
Cuadro 16 Indicadores para Seguimiento y Organización de la Ejecución y Manejo de los Proyectos (2/3)

No.	Name of the Project	Monitoring Indicators		Organization of monitoring
		condition of before implementation of the project	condition after implementation of the project	
b-7	Project for improvement of coffee plantation	1. Progress of completion of construction	1. Growth rate of coffee seedlings 2. Areas that replanted by new seedlings 3. Number of farmers who use composts and improved technical methods 4. Yield of coffee and other cash orchard trees 5. Financial statement of cooperative	A coffee farmer's cooperative in the community An executing office
b-8	Coffee processing plan	1. Progress of completion of construction	1. Total amount of coffee bean to be pulped 2. Rate of milling 3. Financial statement of cooperative	Coffee processing cooperatives in the community An executing office
b-9	Agro-processing development plan	1. Progress of completion of construction	1. Total production 2. Amount of sales of production 3. Financial statement of cooperatives	Agro-processing farmer's cooperatives in the community An executing office
b-10	Plan of direct sale of vegetables	1. Progress of completion of construction	1. Total amount of agricultural products to be dealt with 2. Price of agricultural products to be dealt with	Crop production cooperatives in the community An executing office
b-11	Improvement plan for maize threshing	1. Consumed time to be threshed for maize by traditional method	1. Consumed time to be threshed for maize by threshing equipment	A committee in the community An executing office
b-12	Institutional plan for fostering nucleus farmers	1. Progress of completion of implementation	1. Number of meetings 2. Improvement of capacity of nucleus farmers	A nucleus farmer committee in the community An executing office
b-13	Plan of Revolving fund for hand weaving thread	1. Progress of completion of implementation	1. Amount of sales and stock of thread 2. Financial status of committee 3. Reduction of production costs	Cooperatives An executing office
Improvement plan for living environments				
c-1	Rehabilitation plan of roads in the village	1. Progress of completion of construction		A road committee in the community/ an executing office
c-2	Rehabilitation plan of regional roads	1. Progress of completion of construction		Ministry concerned
c-3	Plan of rural electricity	1. Progress of completion of construction	1. Collection rate of electric charge	A electric and energy committee in the community/an executing office
c-4	Rehabilitation plan for drinking water system	1. Progress of completion of construction	1. Collection rate of water charge 2. Frequency and duration of suspension of water supply	Water committee in the community An executing office
c-5	Water quality improvement plan for the existing drinking water supply system	1. Progress of completion of construction	1. Number of users 2. Status of water treatment system 3. Number of diarrhea patients 4. No. of colon bacillus in potable water	Water committee in the community An executing office
c-6	Plan of extension use of improved cooking stoves and of Sauna bath "Tamasca"	1. Consumption of wood fuel	1. Farmer's perception 2. Consumption of wood fuel	A committee in the community
c-7	Plan of provision toilette facilities	1. Progress of completion of construction	1. Status of facilities	A committee in the community

Cuadro 16 Indicadores para Seguimiento y Organización de la Ejecución y Manejo de los Proyectos (3/3)

No.	Name of the Project	Monitoring Indicators		Organization of monitoring
		condition of before implementation of the project	condition after implementation of the project	
c-8	Plan of night time health education		1. Number of participants	Health committees in the community/an executing office
c-9	Plant medicine growing plan	1. Progress of completion of construction	1. Yield of medical crops 2. Amount of sales of production 3. Financial status	Health guards in the community An executing office
c-10	Improvement plan of service quality given to Comadronas	1. Progress of completion of implementation	1. Maternal mortality rate 2. Number of patients	Comadronas , Health committees in the community An executing office
c-11	Plan for installation of minimal phaaarmacy unit (MPU)	1. Progress of completion of implementation	1. Kind and amount of drug to be sold and stock 2. Profit in MPU 3. Accounting status of MPU 4. Budget use in health committee	A health committee in the community MPU An executing office
c-12	Integrated community health activity Plan	1. Progress of completion of implementation	1. Kind and amount of drug to be sold and stock 2. Profit in MPU 3. Accounting status of MPU 4. Budget use in health committee	A health committee in the community MPU A municipality office An executing office
c-13	Plan for immigrant people to the coastal areas	1. Progress of completion of implementation	1. % of farmers contaminated by agricultural chemicals 2. Number of diarrhea patients	A committee in the community An executing office
c-14	Plan for reducing work load in the mountainous area through coffee processing	1. Progress of completion of implementation	1. Income of beneficiaries 2. Processed amount of coffee and milling rate	A committee in the community An executing office

GRÁFICAS

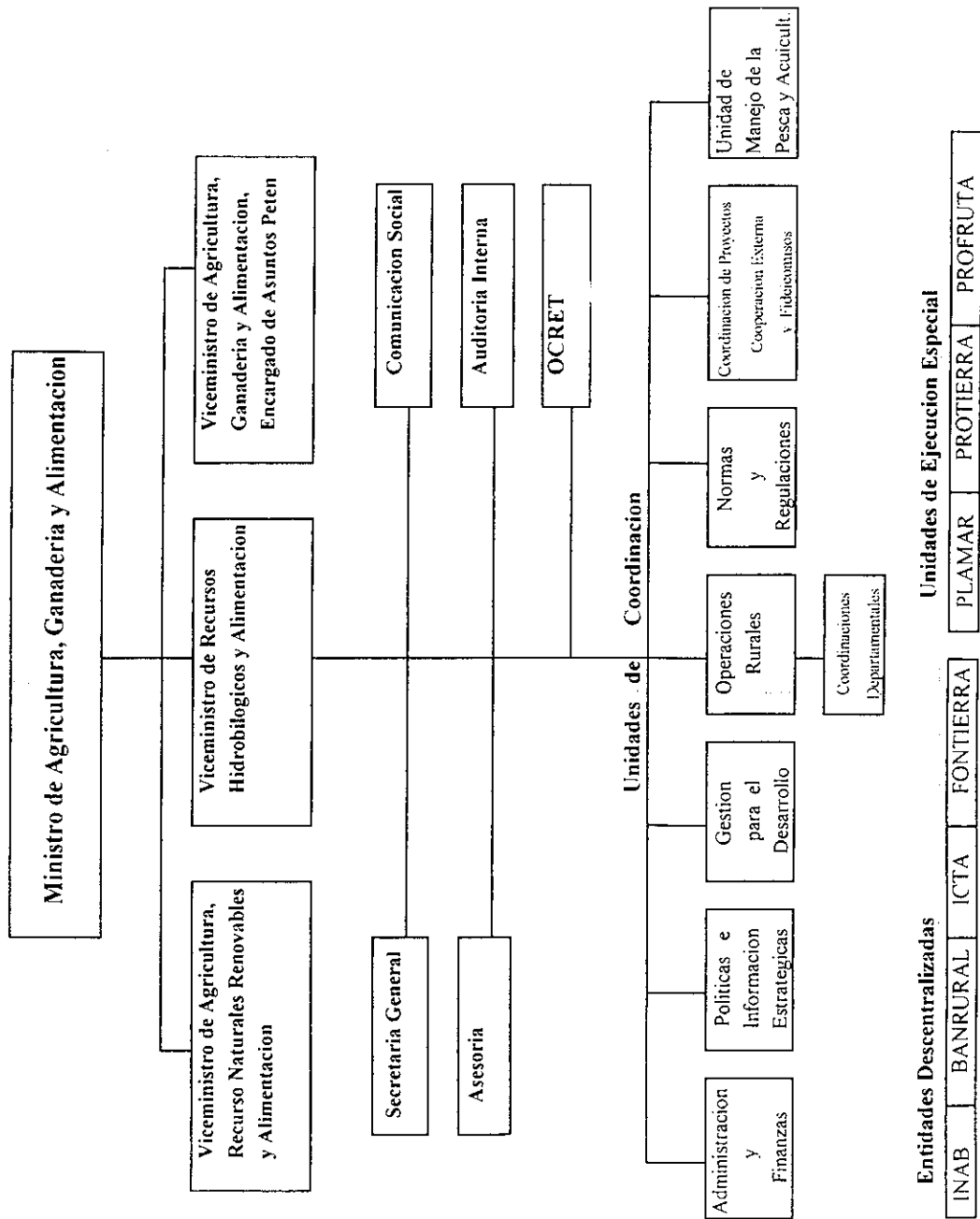


EL ESTUDIO DEL PLAN MAESTRO SOBRE EL DESARROLLO RURAL SOSTENIBLE PARA LA REDUCCION DE LA POBREZA EN LA REGION DEL ALTIPLANO CENTRAL DE LA REPUBLICA DE GUATEMALA

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Gráfica 1

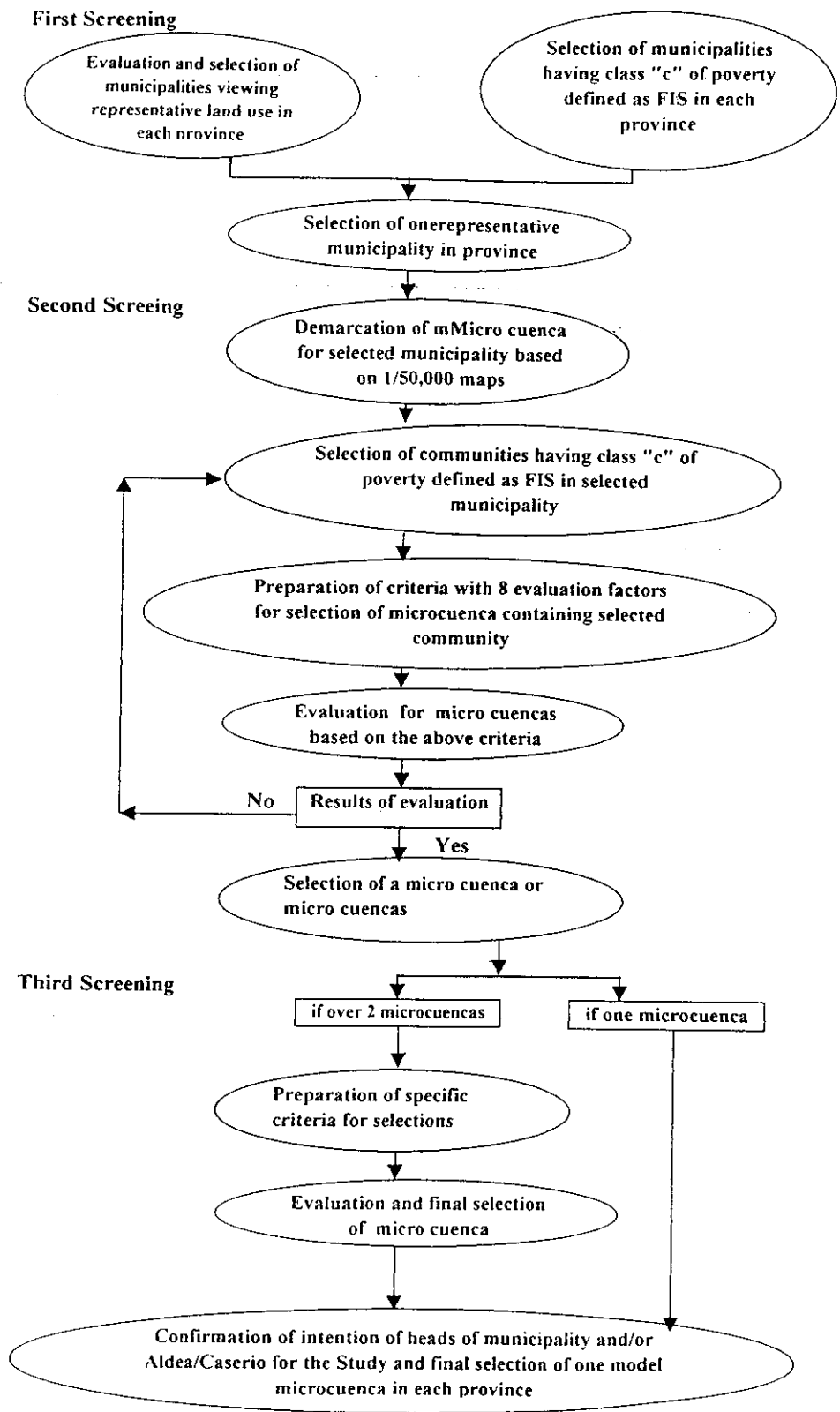
Organizaciones Involucradas en el Proceso de Desarrollo



EL ESTUDIO DEL PLAN MAESTRO SOBRE EL DESARROLLO RURAL SOSTENIBLE PARA LA REDUCCION DE LA POBREZA EN LA REGION DEL ALTIPLANO CENTRAL DE LA REPUBLICA DE GUATEMALA

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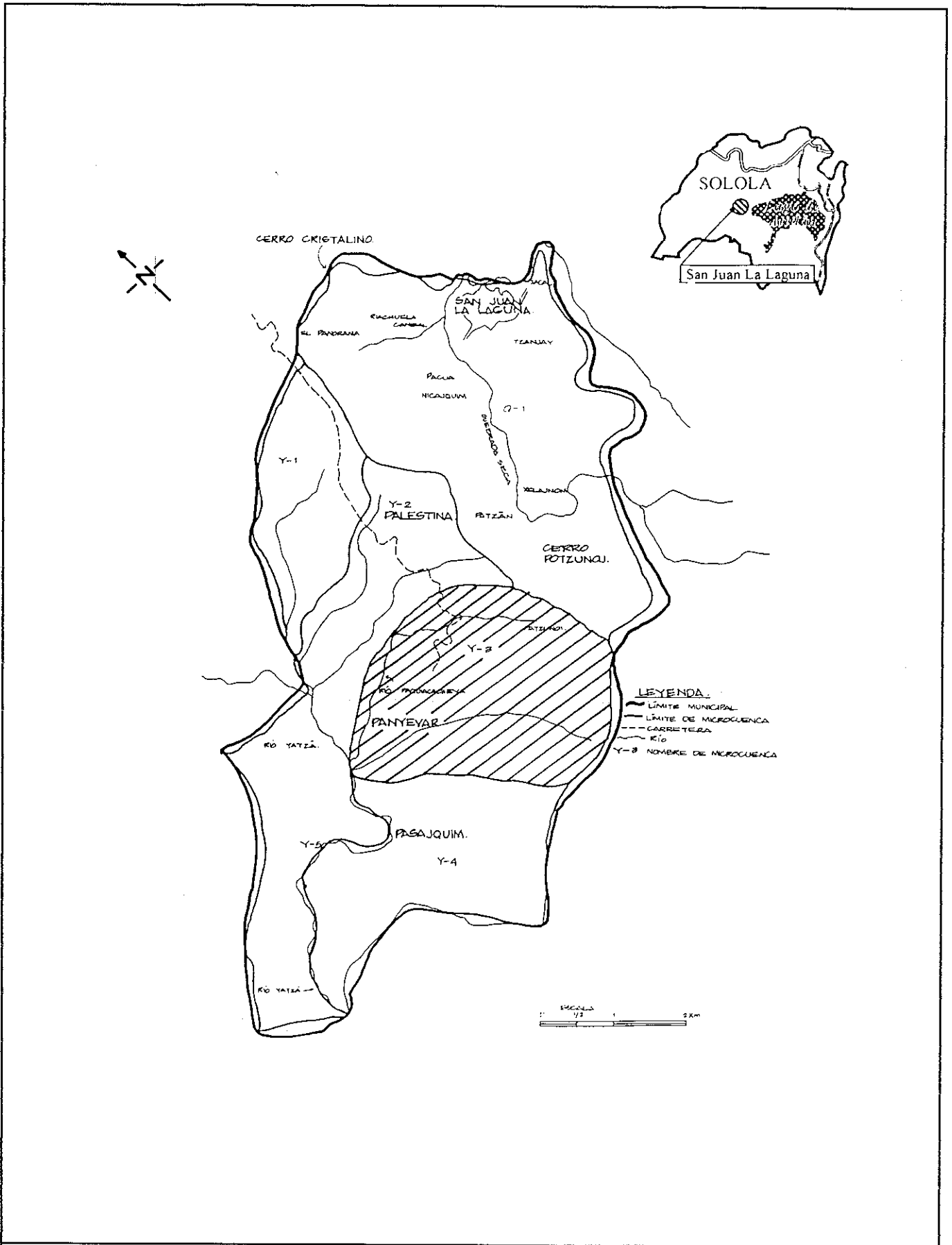
Gráfica 2
Organismos del Ministerio de Agricultura Ganadería y Alimentación



EL ESTUDIO DEL PLAN MAESTRO SOBRE EL DESARROLLO RURAL SOSTENIBLE PARA LA REDUCCION DE LA POBREZA EN LA REGION DEL ALTIPLANO CENTRAL DE LA REPUBLICA DE GUATEMALA

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Gráfica 3
Flujograma para la Selección de las
Micro-cuencas Modelo

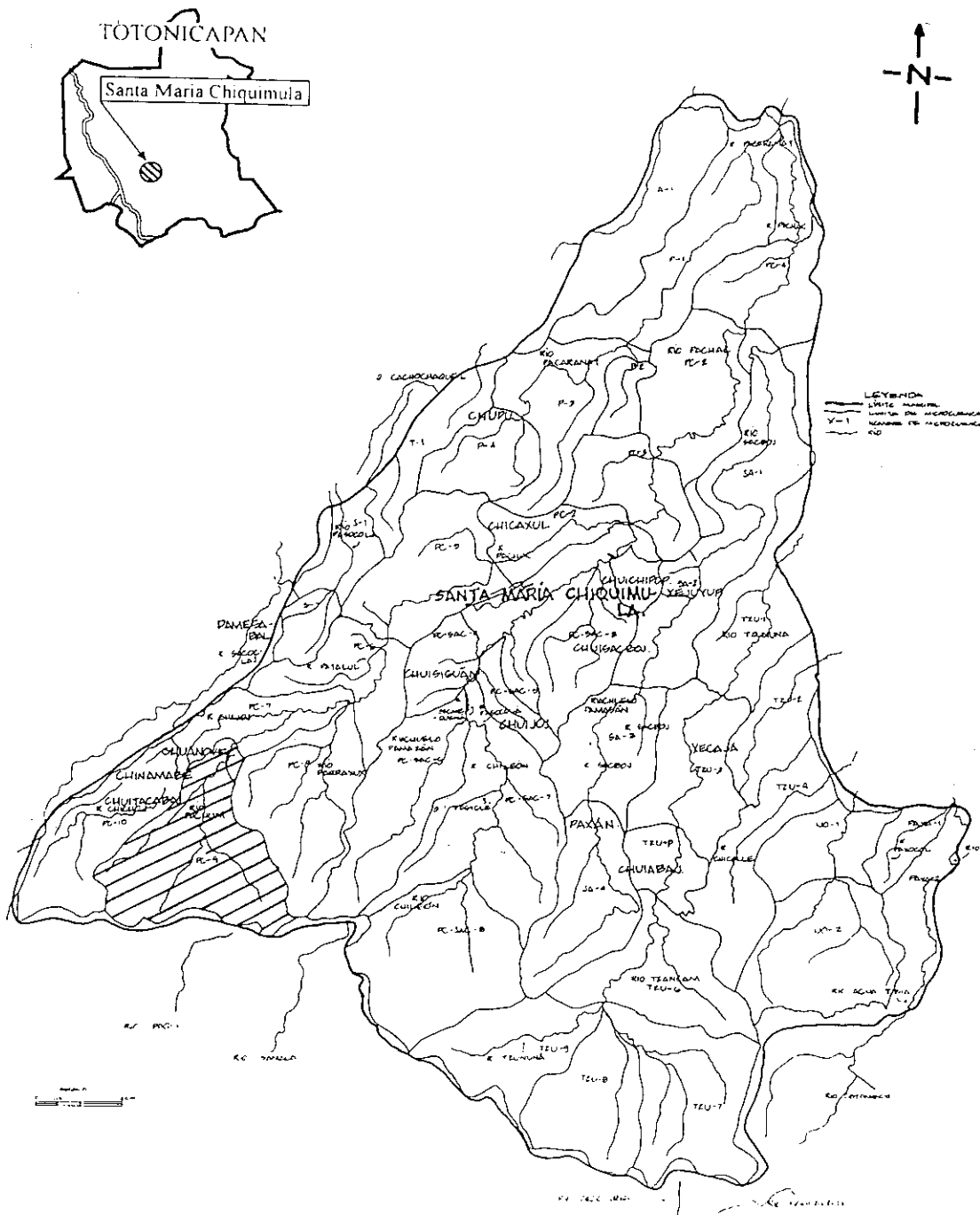


EL ESTUDIO DEL PLAN MAESTRO SOBRE EL DESARROLLO RURAL SOSTENIBLE PARA LA REDUCCION DE LA POBREZA EN LA REGION DEL ALTIPLANO CENTRAL DE LA REPUBLICA DE GUATEMALA

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Gráfica 5

Micro-cuenclas del Municipio de San Juan La Laguna

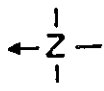


EL ESTUDIO DEL PLAN MAESTRO SOBRE EL DESARROLLO RURAL SOSTENIBLE PARA LA REDUCCION DE LA POBREZA EN LA REGION DEL ALTIPLANO CENTRAL DE LA REPUBLICA DE GUATEMALA

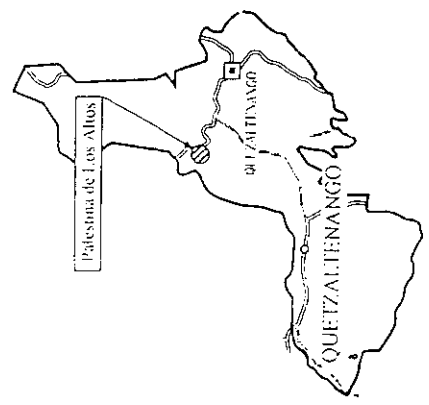
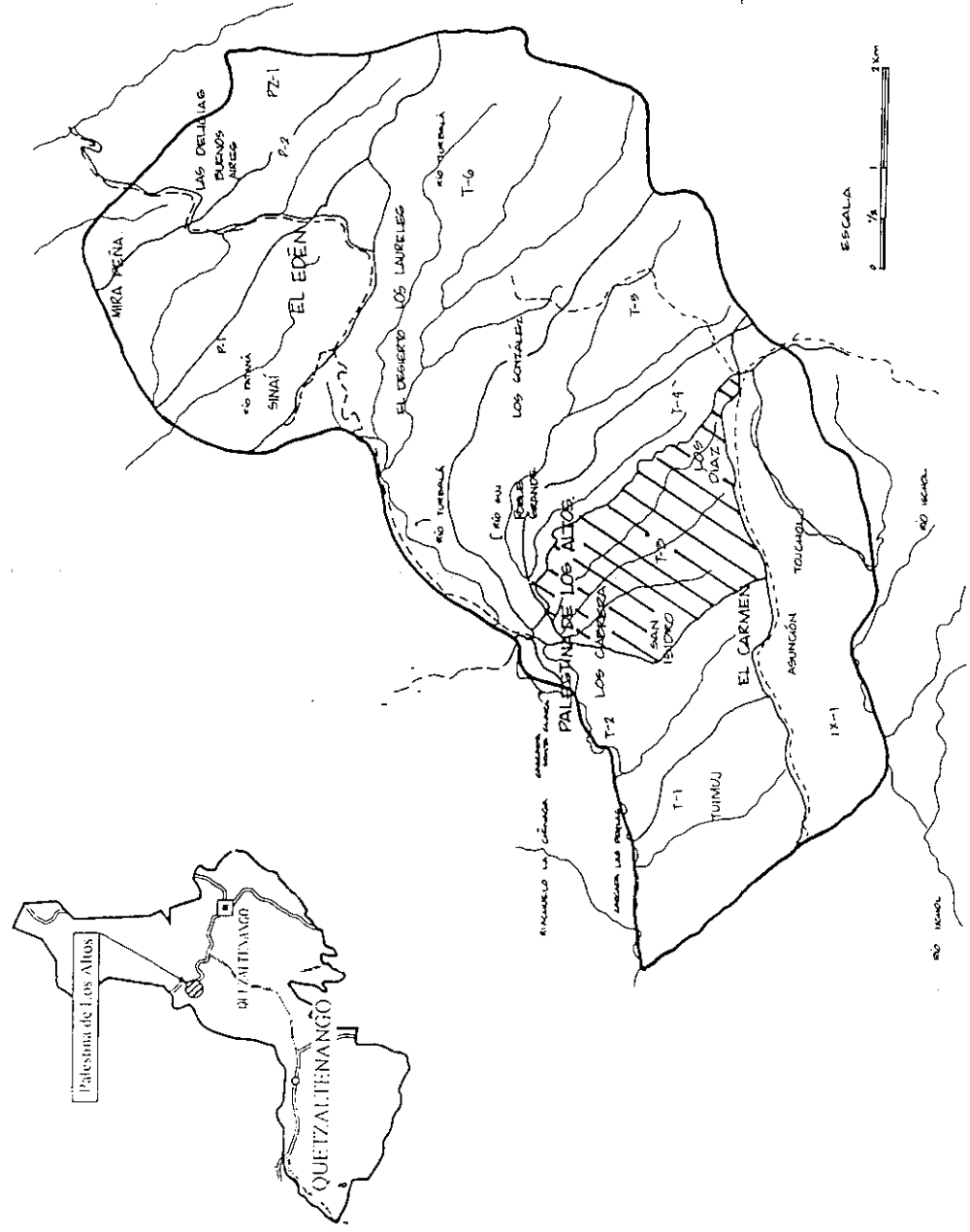
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Gráfica 6

Micro-cuencas del Municipio de Santa María Chiquimula



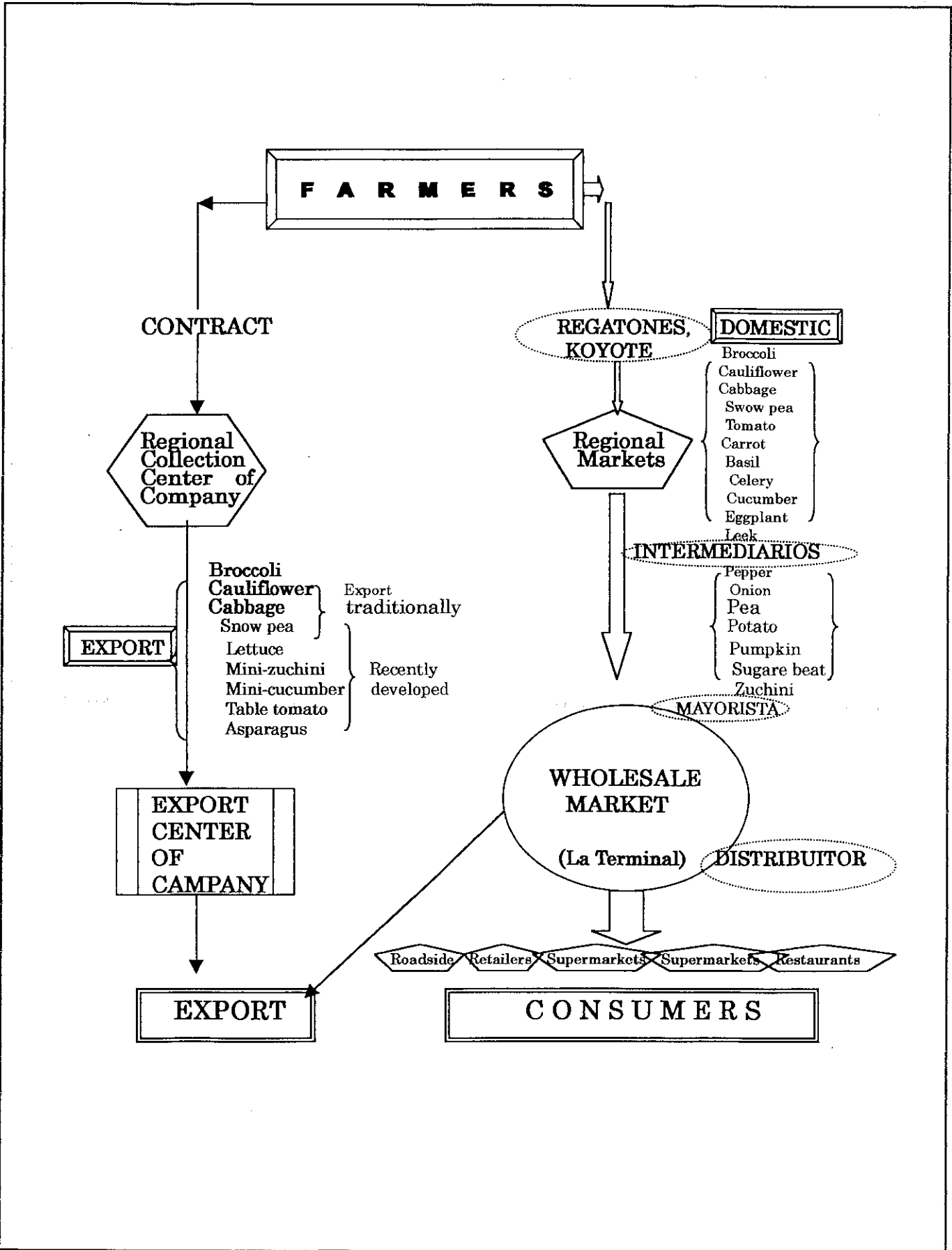
- LEYENDA**
- Límite Municipal
 - - - Límite de Micro-Cuenca
 - - - Carreteras
 - - - Camino
 - - - Río
 - T-1 NOMBRES DE MICRO CUENCA



EL ESTUDIO DEL PLAN MAESTRO SOBRE EL DESARROLLO RURAL SOSTENIBLE PARA LA REDUCCIÓN DE LA POBREZA EN LA REGION DEL ALTIPLANO CENTRAL DE LA REPUBLICA DE GUATEMALA

Gráfica 7
Micro-cuencas del Municipio de Palestina de Los Altos

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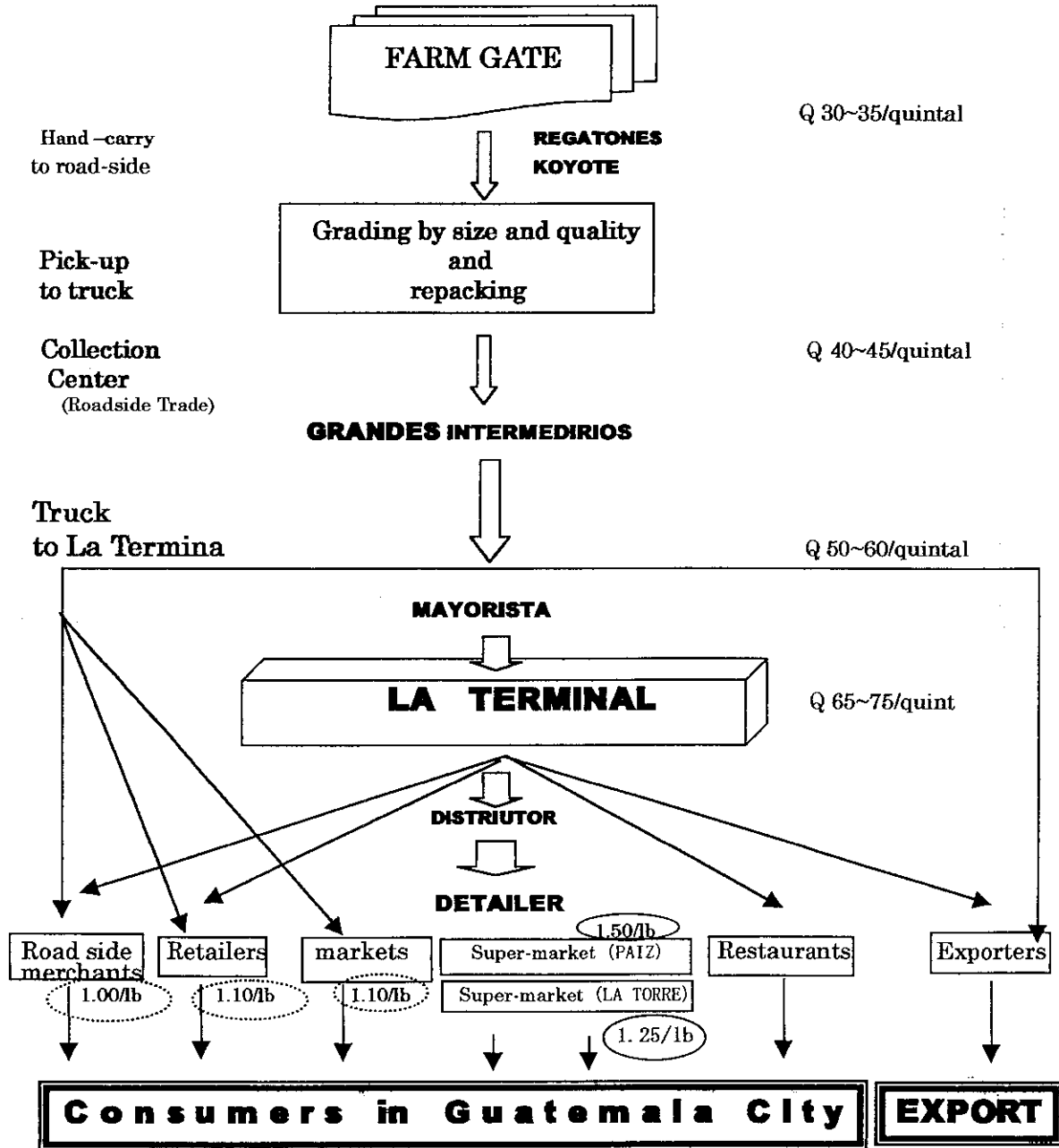


EL ESTUDIO DEL PLAN MAESTRO SOBRE EL DESARROLLO RURAL SOSTENIBLE PARA LA REDUCCION DE LA POBREZA EN LA REGION DEL ALTIPLANO CENTRAL DE LA REPUBLICA DE GUATEMALA

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Gráfica 8
Canales de Comercialización de Hortalizas

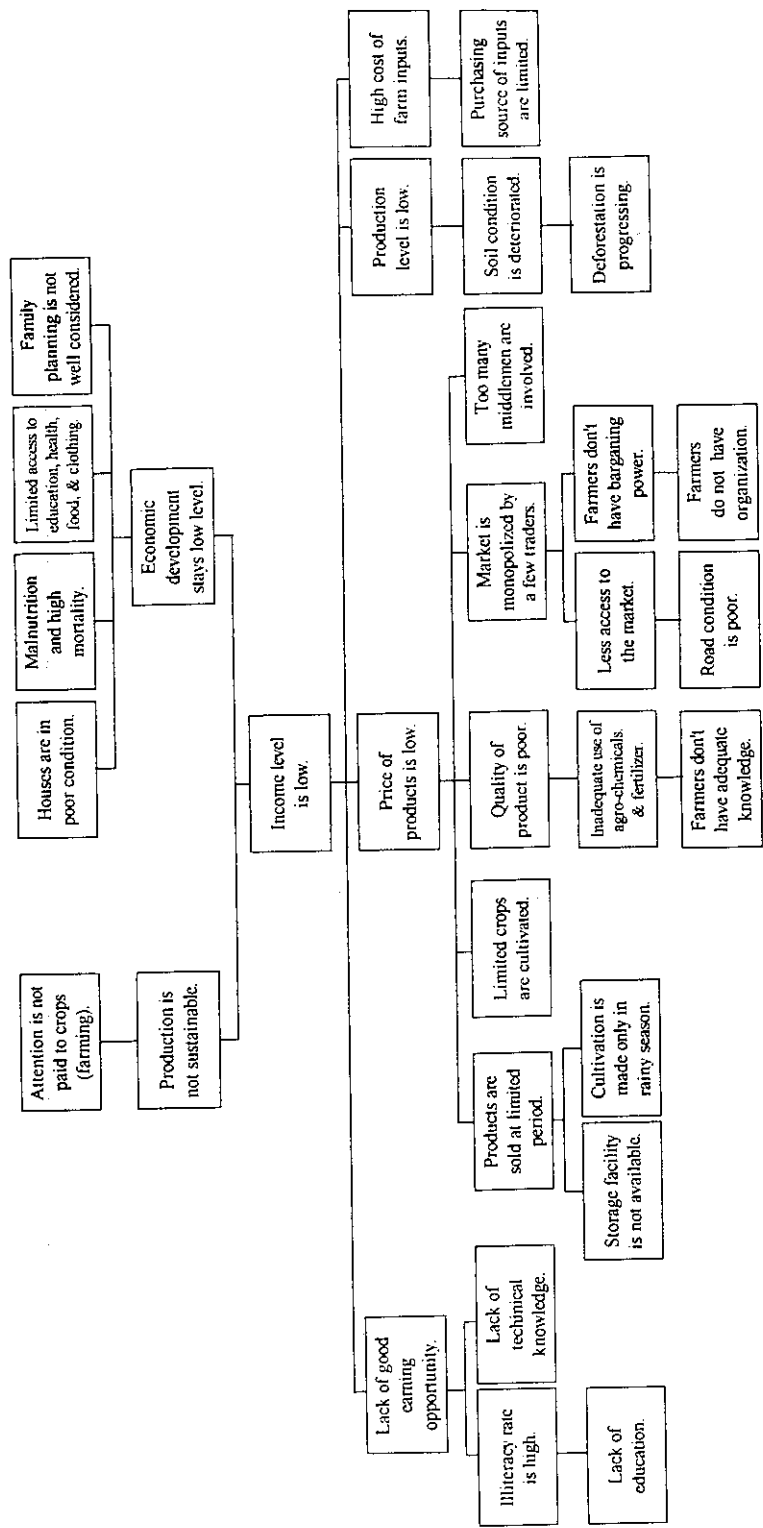
PRODUCTION AREA : Quetzaltenango
 Palestina de Los Altos, Caserío Los Perez
 CONSUMPTION AREA : Guatemala City
 DATE : 16, August, 2000
 COMODITY : Loman, washed, mediana



EL ESTUDIO DEL PLAN MAESTRO SOBRE EL DESARROLLO RURAL SOSTENIBLE PARA LA REDUCCION DE LA POBREZA EN LA REGION DEL ALTIPLANO CENTRAL DE LA REPUBLICA DE GUATEMALA

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Gráfica 9
Canales de Comercio

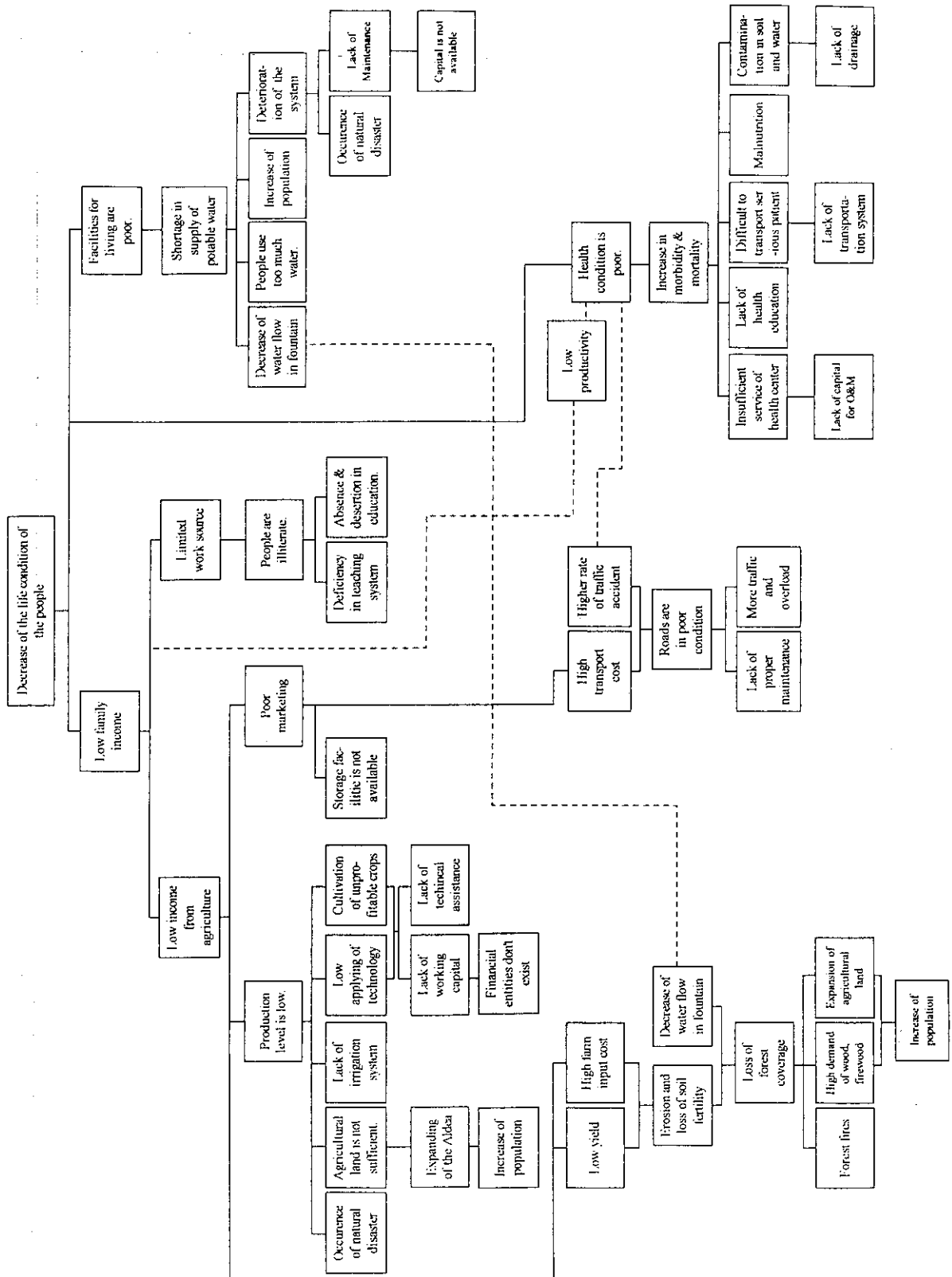


EL ESTUDIO DEL PLAN MAESTRO SOBRE EL DESARROLLO RURAL SOSTENIBLE PARA LA REDUCCION DE LA POBREZA EN LA REGION DEL ALTIPLANO CENTRAL DE LA REPUBLICA DE GUATEMALA

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Gráfica 10

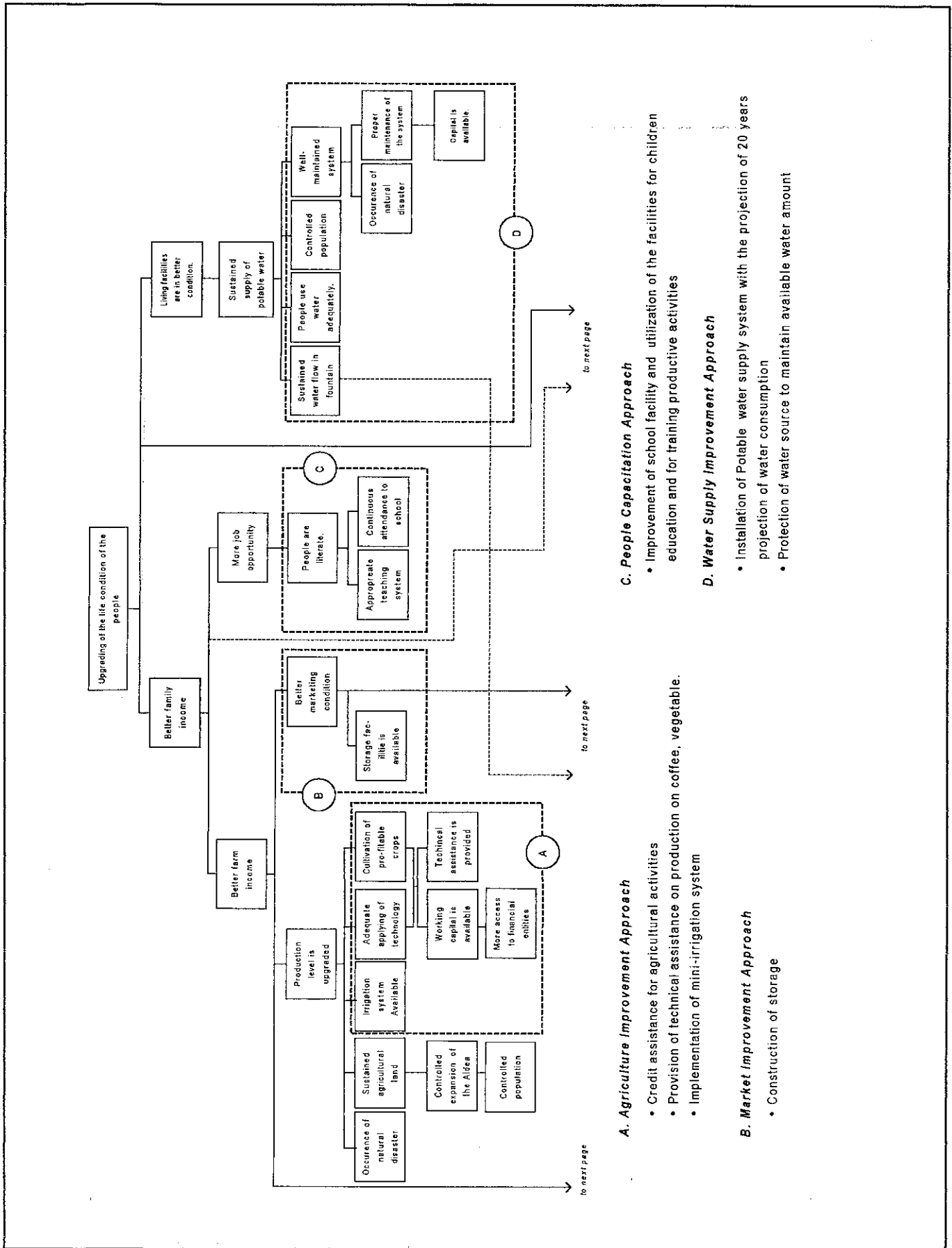
Arbol de Problemas de Xeatzán Baio



EL ESTUDIO DEL PLAN MAESTRO SOBRE EL DESARROLLO RURAL SOSTENIBLE PARA LA REDUCCION DE LA POBREZA EN LA REGION DEL ALTIPLANO CENTRAL DE LA REPUBLICA DE GUATEMALA

Gráfica 12
Arbol de Problemas de Panyebar

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A. Agriculture Improvement Approach

- Credit assistance for agricultural activities
- Provision of technical assistance on production on coffee, vegetable.
- Implementation of mini-irrigation system

B. Market Improvement Approach

- Construction of storage

C. People Capacitation Approach

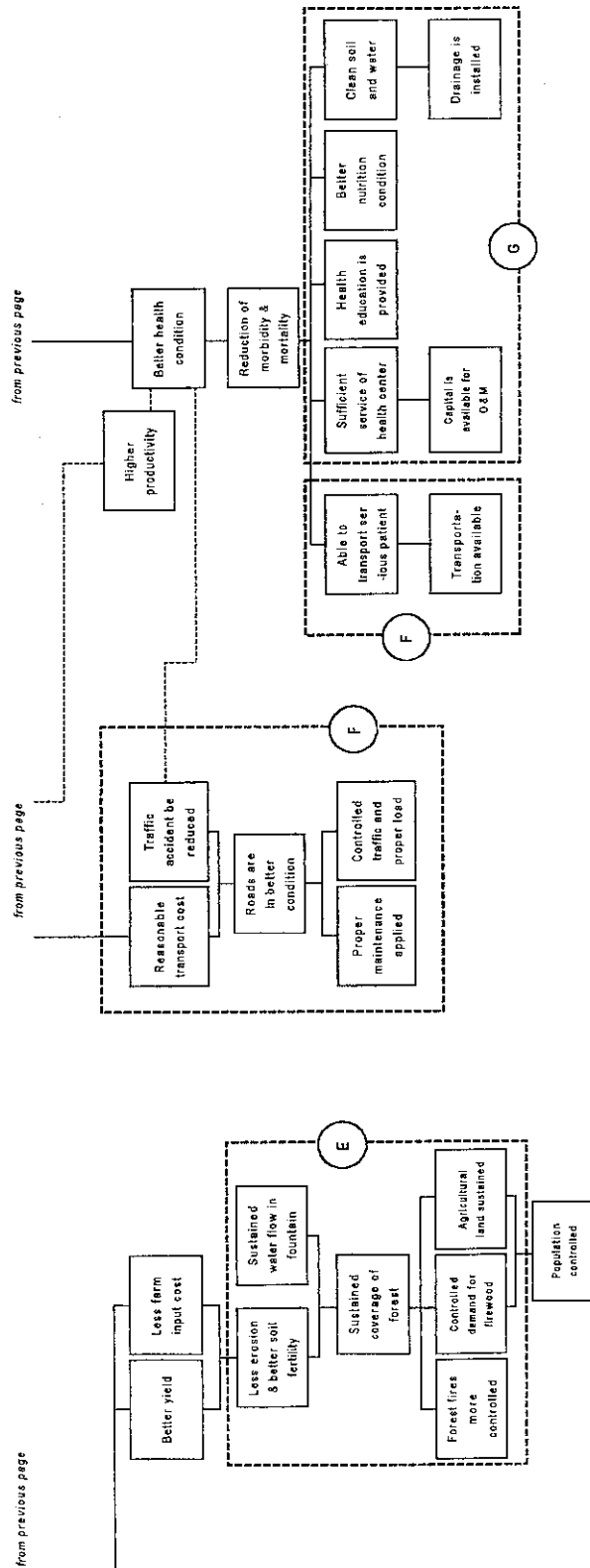
- Improvement of school facility and utilization of the facilities for children education and for training productive activities

D. Water Supply Improvement Approach

- Installation of Potable water supply system with the projection of 20 years projection of water consumption
- Protection of water source to maintain available water amount

EL ESTUDIO DEL PLAN MAESTRO SOBRE EL DESARROLLO RURAL SOSTENIBLE PARA LA REDUCCION DE LA POBREZA EN LA REGION DEL ALTIPLANO CENTRAL DE LA REPUBLICA DE GUATEMALA

Gráfica 13
Arbol de Objetivos con Alternativas de Desarrollo Potenciales para Panyebar (1/2)



E. Environment Improvement Approach

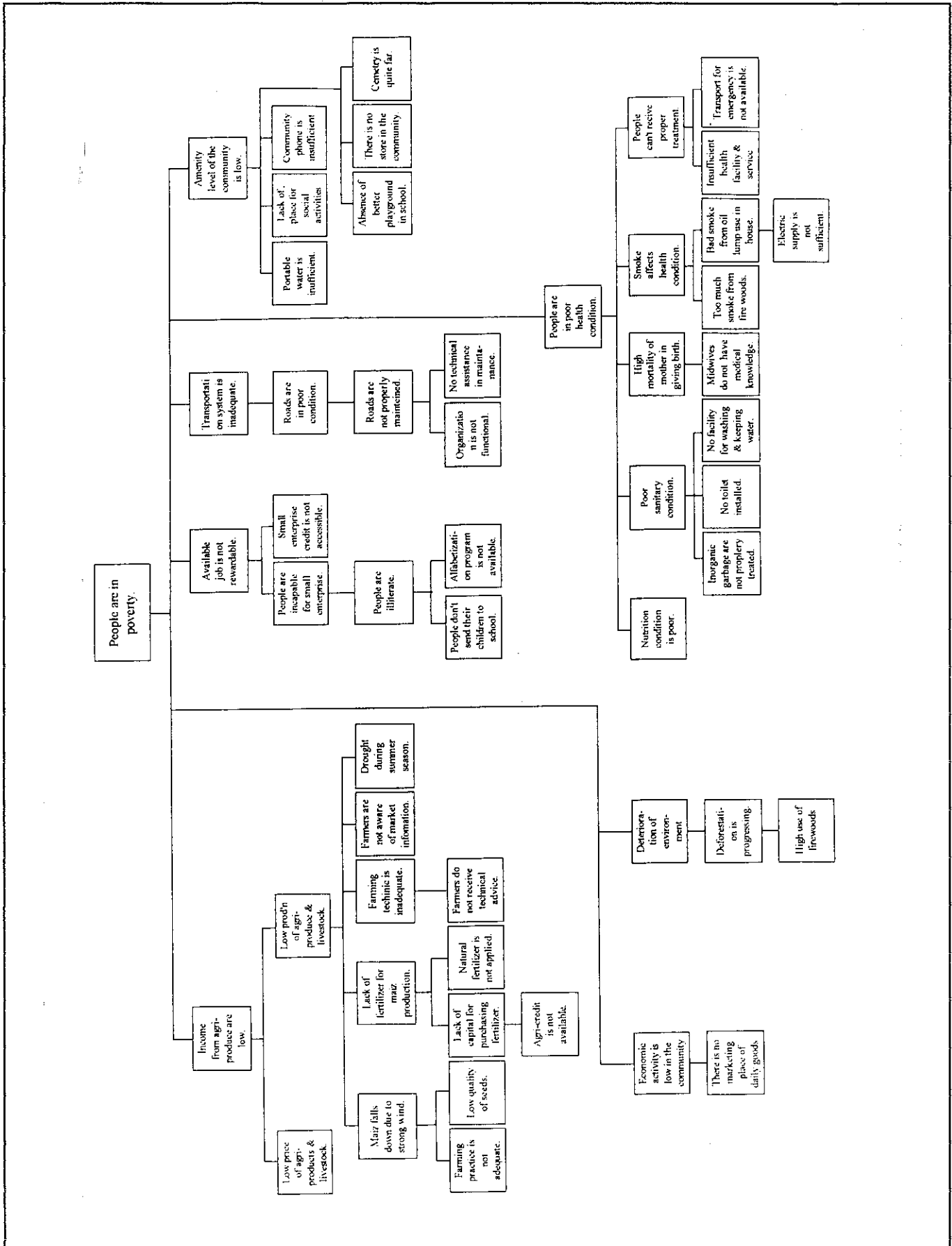
- Installation of infrastructure relating to environment such as treatment plant, latrine, and drainage.
- Implementation of soil conservation program
- Implementation of forest management program
- Implementation of environmental training program

G. Health Improvement Approach

- Disposition of medical staff, medicine and transportation for serious patients

F. Road Improvement Approach

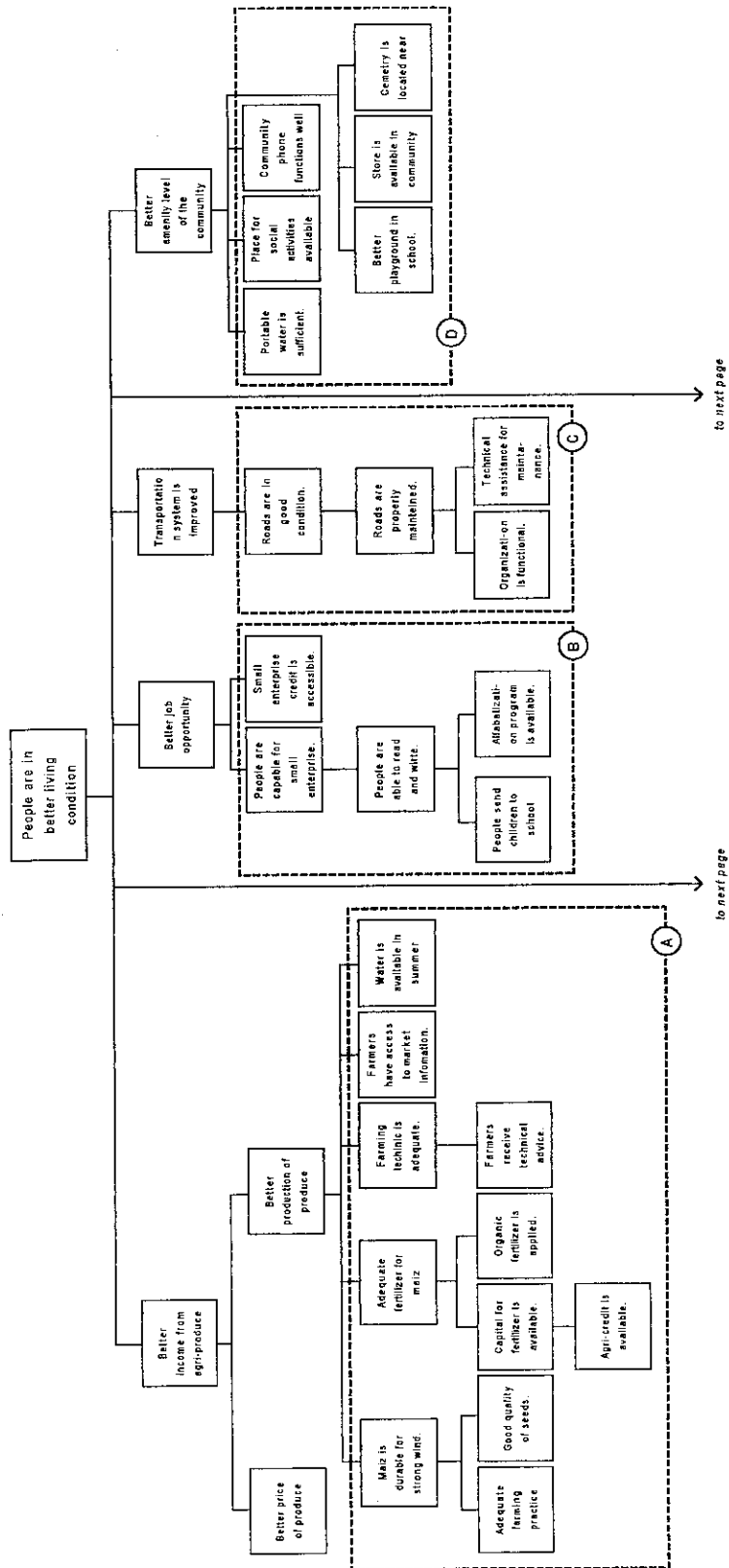
- Improvement of road from Panyebar to Santa Clara La Laguna



EL ESTUDIO DEL PLAN MAESTRO SOBRE EL DESARROLLO RURAL SOSTENIBLE PARA LA REDUCCION DE LA POBREZA EN LA REGION DEL ALTIPLANO CENTRAL DE LA REPUBLICA DE GUATEMALA

Gráfica 14
Arbol de Problemas de Pachum

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D. Amenity Improvement Approach

- Improvement of tap water system
- Enhancement of electric service
- Diffusion of improved stove
- Improvement of school and housing
- Establishment of market in the community
- Establishment of cemetery

B. People Capacitation Approach

- Vocational training on non-agricultural activities (textile, carpenter, etc)
- Credit for commercialization of non-agricultural activities

C. Road Improvement Approach

- Improvement of road and maintenance

A. Agriculture Improvement Approach

- Installation of mini-irrigation
- Technical assistance of agriculture
- Agricultural credit

EL ESTUDIO DEL PLAN MAESTRO SOBRE EL DESARROLLO RURAL SOSTENIBLE PARA LA REDUCCION DE LA POBREZA EN LA REGION DEL ALTIPLANO CENTRAL DE LA REPUBLICA DE GUATEMALA

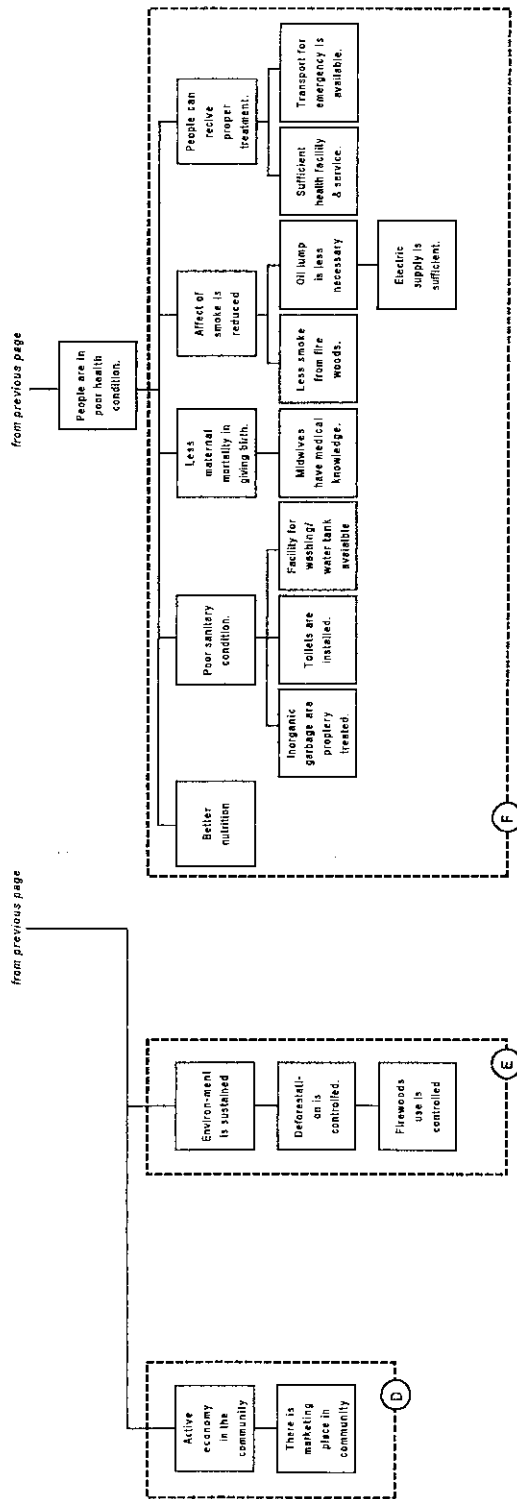
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Gráfica 15

Arbol de Objetivos con Alternativas de Desarrollo Potenciales para Pachum (1/2)

Gráfica 15

Arbol de Objetivos con Alternativas de Desarrollo Potenciales para Pachum (2/2)

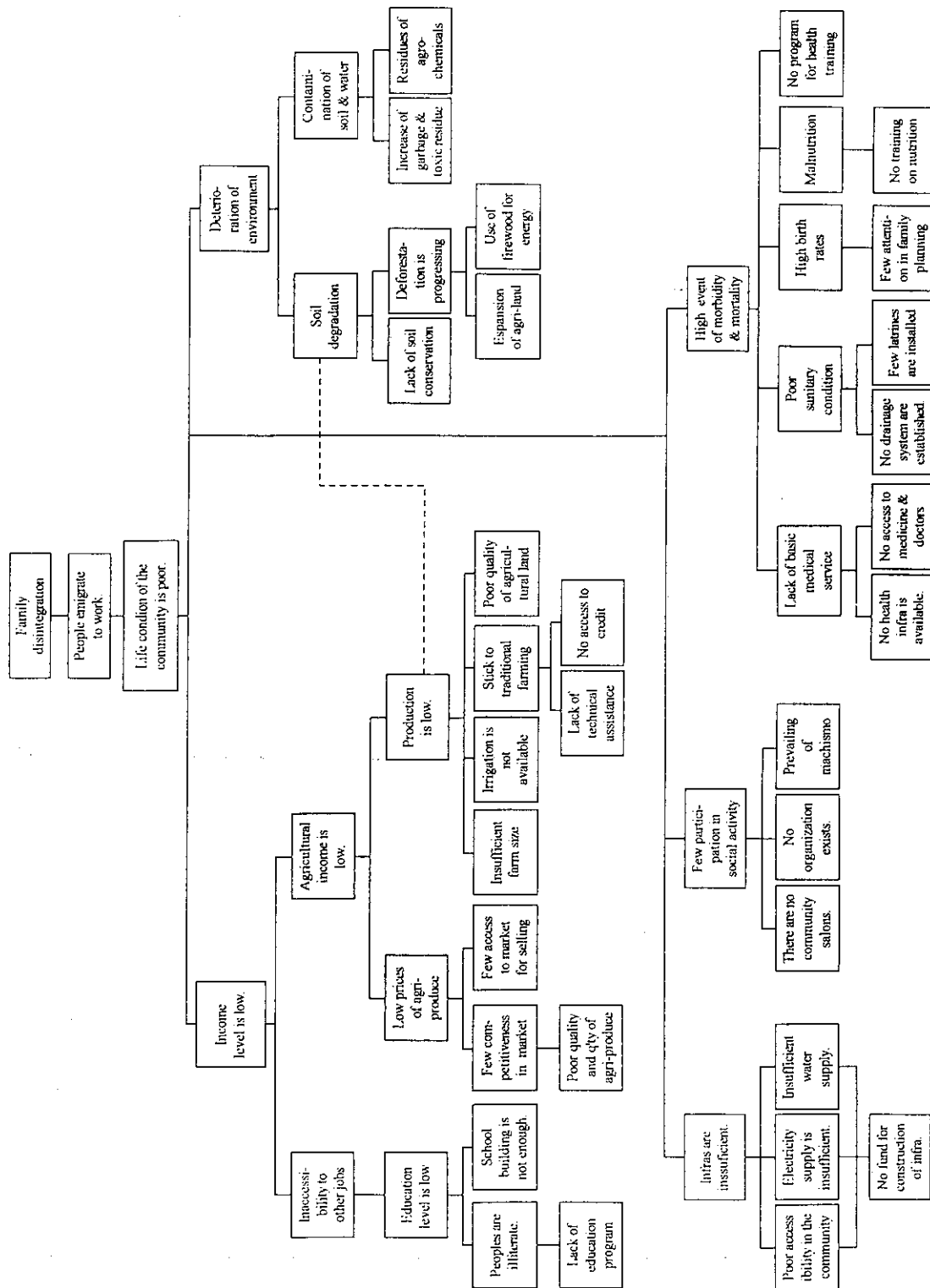


F. Health Improvement Approach

- Installation of medical unit with medicine and medical staff
- Nutrition improvement program
- Installation of latrine and drainage

E. Environmental Conservation Approach

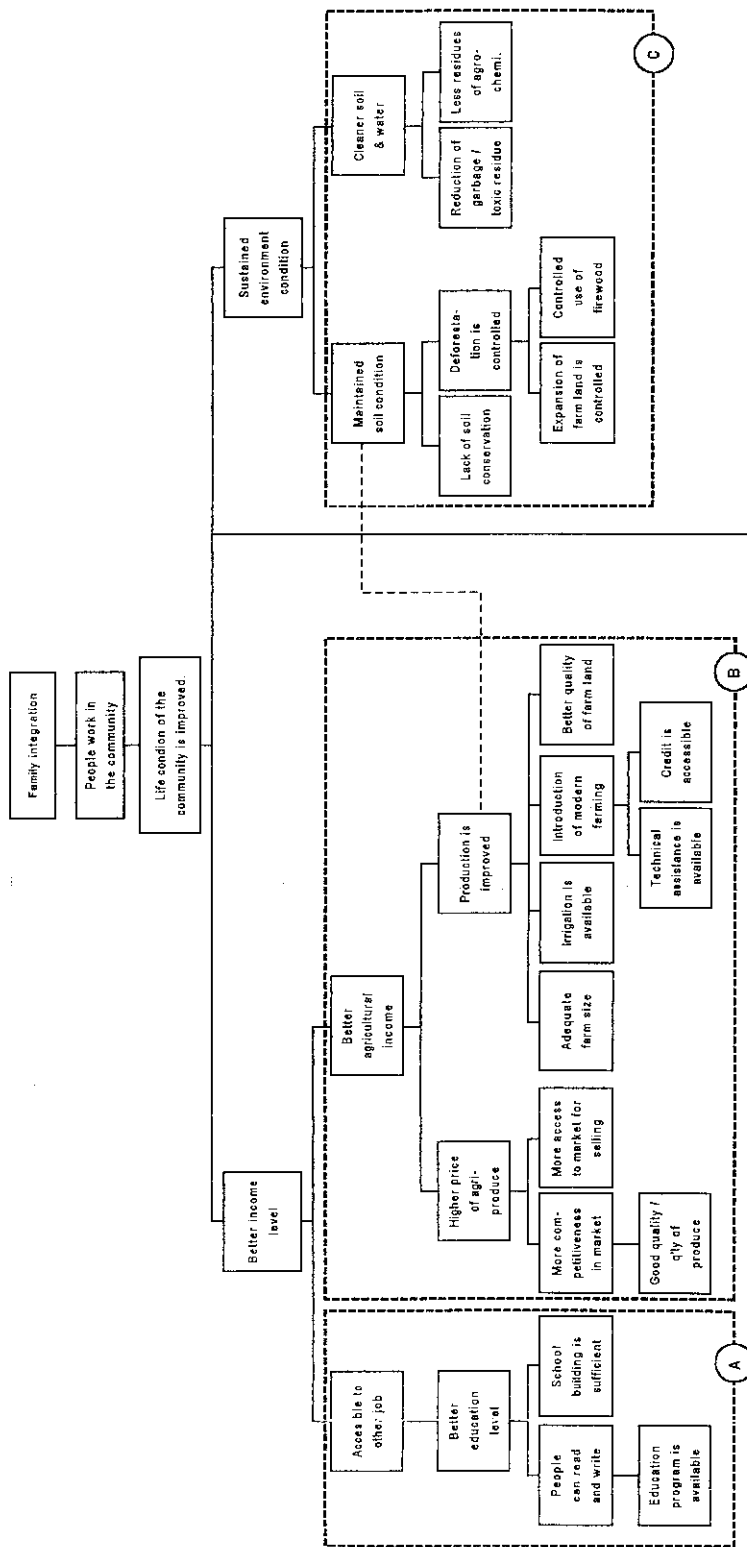
- Appropriate management of forest
- Appropriate treatment of inorganic garbage



EL ESTUDIO DEL PLAN MAESTRO SOBRE EL DESARROLLO RURAL SOSTENIBLE PARA LA REDUCCION DE LA POBREZA EN LA REGION DEL ALTIPLANO CENTRAL DE LA REPUBLICA DE GUATEMALA

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Gráfica 16
Arbol de Problemas para Palestina de los Altos



to next page

A. People Capacitation Approach

- Strengthening of community organization
- Implementation of training of productive activities
- Implementation of education program

B. Agriculture Improvement Approach

- Technical assistance for agriculture
- Introduction of improved seeds
- Provision of agricultural credit
- Promotion of commercialization of produce
- Installation of mini-irrigation system

C. Environment Conservation Approach

- Management of forest conservation
- Reforestation
- Management of soil conservation
- Management of agro-chemicals

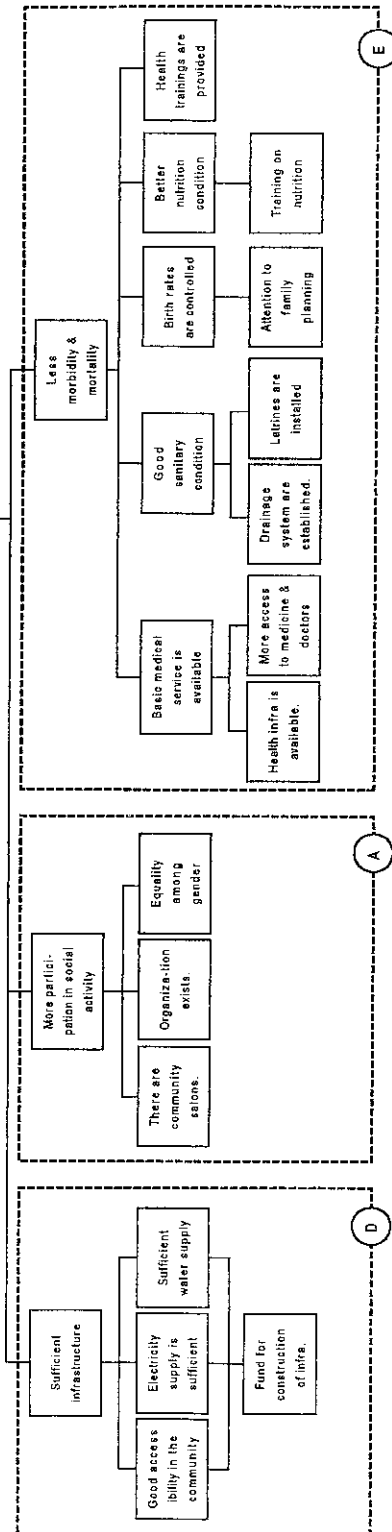
EL ESTUDIO DEL PLAN MAESTRO SOBRE EL DESARROLLO RURAL SOSTENIBLE PARA LA REDUCCION DE LA POBREZA EN LA REGION DEL ALTIPLANO CENTRAL DE LA REPUBLICA DE GUATEMALA

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Gráfica 17

Arbol de Objetivos con Alternativas de Desarrollo Potenciales para Palestina de los Altos (1/2)

from previous page



D. Infrastructure Improvement Approach

- Rehabilitation of water tank for washing
- Asphalt paving of road
- Enhancement of potable water supply system
- Construction of drainage
- Enlargement of school facility

E. Health Improvement Approach

- Construction of health post
- Implementation of health education program
- Disposition of medical staff and medicine
- Establishment of communal pharmacy
- Establishment of medical unit

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Gráfica 17
Arbol de Objetivos con Alternativas de Desarrollo Potenciales para Palestina de los Altos (2/2)